Ventura County
Air Pollution
Control District

ANNUAL COMPLIANCE CERTIFICATION
SIGNATURE COVER FORM

A copy of each Annual Compliance Certification shall be submitted to EPA, Region 9, at the following address:

Mr. Gerardo Rios, Chief
Permits Office (AIR-3)
Office of Air Division
EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Confidentiality

All information in a Part 70 permit compliance certification is public information. The Part 70 permit is also public information.

Certification by Responsible Official

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this compliance certification are true, accurate, and complete.

Signature and Title of Responsible Official:	Date: 2/6/20
Title: Principal Manager	

Time Period Covered by Compliance Certification

01 / 01 / 19 (MM/DD/YY) to 12 / 31 / 19 (MM/DD/YY)

SOUTHERN CALIFORNIA EDISON®

An EDISON INTERNATIONAL® Company

February 13, 2020

Mr. Keith Macias
Manager, Compliance Division
Ventura County Air Pollution Control District
669 County Square Drive
Ventura, CA 93003.

Subject: Submission of Part 70 Permit Annual Compliance Certification
McGrath Peaker Generating Station, Permit No. 07891

Dear Mr. Macias,

Southern California Edison Company is submitting the Part 70 Permit Annual Compliance Certification for McGrath Peaker Generating Station, Permit #07891, for the period between January 1, 2019 and December 31, 2019.

During the subject period, this facility experienced one excess carbon monoxide emissions deviation on 1/29/2019, which was attributed to the high rate of water injection into the combustion turbine combustor. An excess emissions report for the incident was submitted to the District on 02/01/2019, and additional information was also provided to Mr. Edward Swede in a follow-up email on 02/20/2019. A Deviation Summary Form for the incident is included with this report.

Also, please find enclosed the Annual Compliance Certification Signature Cover Form, Permit Attachment Forms, Source Test Summary Form, and supporting documents.

If you have any questions regarding these reports, please contact me at (909) 809-4368.

Sincerely,

Chijioke Akunyili, PE
Environmental Science Advisor
Environmental Services Department

Enclosures

cc: Mr. Gerardo Rios, Chief
Permits office (AIR-3)
Office of Air Division
USEPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

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A. Attachment # or Permit Condition #: 7891-T1-161 Conditions # 1-5	D. Frequency of monitoring: Annual Source Test and Continuous Emissions Monitoring
B. Description: Gas Turbine Emissions Limits: - NOx emissions shall not exceed 2.5 ppmvd @ 15% O2 - NOx emissions shall not exceed 25 ppm @ 15% O2 (4-hr rolling avg) - ROG emissions shall not exceed 2.0 ppmvd @ 15% O2 - CO emissions shall not exceed 6.0 ppmvd @ 15% O2 - NH3 emissions shall not exceed 5.0 ppmvd @ 15% O2	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable Source Test Summary Form attached.
C. Method of monitoring: Continuous Emissions Monitoring. Annual source test performed on 7/8/2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): I H. *Excursions, exceedances, or other non-compliance? (Y or N): Y *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 7891-T1-161 Conditions # 6-12	D. Frequency of monitoring: Continuous monitoring
B. Description: Continuous Emissions Monitor - Permittee shall: -Install, Operate, Maintain, and Calibrate CEMS pursuant to Rule 74.23; Rule 103, NSPS KKKK and 40 CFR 75. -Promptly report emission violations as indicated by the CEMS -Maintain permanent CEMS records. -Maintain records of all maintenance activities	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable N/A
C. Method of monitoring: Attachment #1: CEMS emissions and natural gas usage records. Attachment #2: CEMS maintenance record. Attachment #3: CEMS calibrations record. Attachment #4: SCR and CO catalyst temperature and pressure devices calibrations records. Attachment #5: Fuel and Ammonia flow-meters calibrations records.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 7891-T1-161 Conditions # 13,14	D. Frequency of monitoring: Continuous monitoring
B. Description: Permittee shall submit operating records pursuant to Rule 74.23.E of: -Actual fuel consumption or operating hour records for the past 12 months; -Annual source test and control system operating parameters Permittee shall submit excess emissions and monito ring report every 6 months pursuant to 40 CFR 60, Subpart KKKK, including 4-hour rolling NOx average	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable Source Test Summary Form attached
C. Method of monitoring: An in-line fuel flow meter is used to monitor actual fuel consumption. Attachment #1 is rolling twelve months total gas consumption. Compliance source test was performed on 7/8/19, test report has been submitted to the District. Excess emissions and monitoring systems reports have been submitted to the District	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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Period Covered by Compliance Certification: 01 / 01 / 19 (MM/DD/YY) to 12 / 31 / 19 (MM/DD/YY)

A. Attachment # or Permit Condition #: 7891-T2 Conditions # 1-2	D. Frequency of monitoring: N/A
B. Description: 40 CFR 60 KKKK: SO2 emissions shall not exceed 0.9 lbs/MW-hr or total sulfur in fuel shall not exceed 0.06 lbs/MMBTU heat input	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Only PUC quality gas supplied by Southern California Gas Co. is combusted in the turbine, therefore the facility is in compliance with Rule 64 and 40 CFR 60 Subpart KKKK pursuant to 7891-T2 condition #2.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 7891-T2 Conditions # 3,4	D. Frequency of monitoring: None for PUC quality gas
B. Description: Pursuant to Rule 54.B.1, no person shall discharge sulfur compounds calculated as SO2 in excess of (a) 300 ppmv at point of discharge; (b) 0.25 ppmv, 1-hr average and/or 0.04 ppmv, 24-hr average at ground or sea level.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Combustion of PUC quality natural gas ensures compliance with this requirement. No additional monitoring was required pursuant to 07891-T2 condition #3. No source testing pursuant to condition #4 is required.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 07891-Engine-161 Condition #1	D. Frequency of monitoring: Continuous
B. Description: The permitted emissions for the 924 BHP Waukesha engine are based on a NOx emission level of 1.25 grams/BHP-hr. Permittee shall maintain manufacturer's emission documentation that the engine meets this emission level.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Attachment #6 is the generator and engine specification. Emissions Performance vs load curve on page 7 of the attachment shows the engine complies with NOx emissions level of 1.25 grams/BHP-hr.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: 07891-Engine-161 Conditions 2 & 7	D. Frequency of monitoring: Monthly
B. Description: -Engine shall be used only when electrical power fails, except for testing and maintenance; -Engine recordkeeping requirement	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Attachment #7, engine operating log is used to document all engine operations including emergency use hours and testing/maintenance use hours. The log shows the engine in question operated 2.4 hours in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 07891-Engine-161 Conditions # 3, 4, 5, 6 & 7	D. Frequency of monitoring: Monthly
B. Description: -Engine shall not operate more than 200 hrs/yr; -Engine shall be equipped with a non-resettable time meter; -Annual compliance certification shall include engine mfr., model number, operator ID and location. -Total engine hours shall be reported annually.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Engine operating log is used to document all engine operations including emergency use hours and testing/maintenance use hours. (Attachment #7, engine operating log indicates manufacturer, model number, operator ID and location of use). The engine operated 2.4 hours in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: PO07891PC-111 Condition 1	D. Frequency of monitoring: Continuous monitoring
B. Description: Annual natural gas limit for turbine operation shall not exceed 1,667 MMSCF/yr.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: An in-line fuel flow meter calibrated annually is used to monitor natural gas combusted in the turbine. Attachment #1 shows the rolling 12-month natural gas consumption for turbine operation and it indicated only 192.5 mmscf of natural gas was combusted in the gas turbine in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: PO07891PC1-111 Condition 2	D. Frequency of monitoring: Continuous Monitoring
B. Description: Turbine annual NOx emissions shall not exceed 4.81 tons/yr. Facility annual NOx emissions shall not exceed 4.99 tons/yr. A rolling 12-month record shall be maintained.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Continuous Emissions Monitoring, Attachment #1 contains the rolling 12-month NOx emissions for 2019 and it indicate 1.03 tons of NOx were emitted from the gas turbine. Attachment 7 indicate 0.0031 tons of NOx was emitted from the blackstart generator engine.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: PO07891PC1-111 Condition 3	D. Frequency of monitoring: Monthly
B. Description: The 924 BHP Waukesha natural gas engine shall not be used for more than 200 hours per year.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: A totalizing hour meter documents engine operated hours. All engine operation is documented in an operation log. Attachment #7, engine operating log showed the engine operated 2.4 hours in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: PO07891PC1-111 Condition 4	D. Frequency of monitoring: N/A
B. Description: The LM-6000 SPRINT gas turbine and the 924 BHP Waukesha engine shall be fired on PUC regulated natural gas.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Southern California Gas Company supplies only PUC quality natural gas to McGrath Generating Station.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: PO07891PC1-111 Condition 5	D. Frequency of monitoring: N/A
B. Description: The 10,500 gallon ammonia storage tank shall be equipped with a pressure vacuum relief valve set at 50 psig and shall be vented to the vessel from which it is being filled during all filling operations.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: -Visual observation during filling to verify the tank is vented to the filling vessel. -Attachment #8 is the pressure vacuum relief valve calibration sheet.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: PO07891-111 Condition 6	D. Frequency of monitoring: N/A
B. Description: Exempt solvents, coatings, adhesives, and lubricants.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: A list of all solvents and coatings used at the facility is maintained. Attachment #9 is the coating and solvent usage record for 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 50	D. Frequency of monitoring: Routine surveillance, annual certificaiton
B. Description: Rule 50 - Opacity: No visible emissions for a period or periods greater than 3 minutes in any one hour which are as dark or darker in shade as No. 1 on the Ringelmann Chart, or equivalent to 20% opacity or greater.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: EPA Method 9
C. Method of monitoring: Annual certification indicating emissions unit at the facility comply with applicable sections of Rule 50. Attachment #10 is a copy of the 2019 opacity survey for the gas turbine performed on July 8, 2019. Engine opacity survey was not performed because the engine was inoperable.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: VCAPCD Rules 54.B.1 & 54.B.2	D. Frequency of monitoring: Upon request
B. Description: -Stationary IC engine & gas turbine operators shall not discharge sulfur compounds in excess of 300 ppm by vol (SO2) at 15% O2. -Sulfur concentration at ground level or at any point at or beyond property line shall not exceed 0.25 ppmv 1-hr average or 0.04 ppmv 24-hr average.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: EPA Method 6, 6A, 6C, 8, 15, 16A, 16B, or SCAQMD method 307-91
C. Method of monitoring: -Only PUC quality gas is combusted at the facility in compliance with Rule 64 and by extension Rule 54.B.1; -Sulfur concentration at point of discharge and ground level concentration of SO2 shall be monitored upon District's request.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 55 - Fugitive Dust	D. Frequency of monitoring: Routine Surveillance
B. Description: Fugitive dust emissions resulting from any operation, disturbed surface area or man made conditions shall not be visible beyond the midpoint of an adjacent street. Opacity shall be less than 20 percent and track out shall be less than 25 feet.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: On site operations monitoring: All applicable sources of dust at the facility are operating in compliance with Rule 55. Facility imported 200 tons/160 cu.yrd of gravel in 2019 for landscaping purpose.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 57.1	D. Frequency of monitoring: Upon request
B. Description: Particulate Matter emission from fuel burning equipment shall not exceed 0.12 lbs. per million BTU.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: CARB Method 5
C. Method of monitoring: -Per District Analysis dated Dec. 3rd, 1997, Gas Turbine emission factors was determined to be 0.0419 lb./MMBTU, less than 0.12 lbs./MMBTU limit specified in Rule 57.1 -PM source test will be conducted upon request by the District.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: VCAPCD Rule 64.B.1	D. Frequency of monitoring: None for PUC quality gas
B. Description: Sulfur content of fuels: No person shall burn gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of fuel (788 ppmv).	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Southern California Gas Company supplies only PUC quality natural gas to McGrath Peaker. No additional monitoring required.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 74.6	D. Frequency of monitoring: N/A
B. Description: Surface Cleaning and Degreasing: S-34 NG Cleaner VOC 0.21 lb/gal and Simple Green VOC 0.042 lbs/gal are used at the facility. Quantity of non-refillable aerosol solvent used at the facility is less than 160 oz per day.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: An annual log is used to document surface cleaning and degreasing activities. Attachment 9 is the coating, solvent, adhesive, and aerosol usage log.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 74.11.1	D. Frequency of monitoring: N/A
B. Description: Large Water Heaters and Small Boilers: comply with NOx emission limits for subject equipment. Maintain list of equipment.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: There are no large water heaters or small boilers installed at the faciltiy	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: VCAPCD Rule 74.22	D. Frequency of monitoring: N/A
B. Description: Natural Gas Fired Fan-Type Central Furnaces: comply with NOx emission limits for subject equipment. Maintain list of equipment.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: There are no natural gas fired fan-type central furnaces installed at the facility.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 74.1	D. Frequency of monitoring: N/A
B. Description: Abrasive Blasting: Comply with visible emissions standards and methods for abrasive blasting operations. Maintain records.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: No abrasive blasting operation was performed at McGrath Peaker in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: VCAPCD Rule 74.2	D. Frequency of monitoring: N/A
B. Description: Architectural Coatings: Comply with VOC content limits and maintain records for architectural coating use.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Coatings used at the facility in 2019 were for industrial maintenance of steel structures and for transformer metal parts, which were in compliance with the VOC content limits. Attachment 9 is the coating and solvent usage log for 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

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A. Attachment # or Permit Condition #: VCAPCD Rule 74.4.D	D. Frequency of monitoring: N/A
B. Description: Cutback Asphalt: Comply with organic compound limit (0.5%) for road oils applied for street paving or maintenance.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Cut back asphalt activities were not performed at the facility in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #: 40 CFR Part 61, Subpart M	D. Frequency of monitoring: N/A
B. Description: National Emission Standards for Asbestos: Comply with applicable requirements for demolition/renovation activities.	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable: N/A
C. Method of monitoring: Asbestos demolition/renovation activities were not performed at the facility in 2019.	F. Currently in Compliance? (Y or N): Y G. Compliance Status? (C or I): C H. *Excursions, exceedances, or other non-compliance? (Y or N): N *If yes, attach Deviation Summary Form

A. Attachment # or Permit Condition #:	D. Frequency of monitoring:
B. Description:	E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable
C. Method of monitoring:	F. Currently in Compliance? (Y or N): _____ G. Compliance Status? (C or I): _____ H. *Excursions, exceedances, or other non-compliance? (Y or N): _____ *If yes, attach Deviation Summary Form

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DEVIATION SUMMARY FORM

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A. Attachment # or Permit Condition #:	B. Equipment description:	C. Deviation Period: Date & Time Begin: 1/29/19, 8:46 PM End: 1/29/19, 9:29 PM When Discovered: Date & Time 1/29/19 8:46 PM
7891-T1-161 Condition 1B	GE LM-6000 PC SPRINT Gas Turbine	
D. Parameters monitored:	**E. Limit:**	**F. Actual:**
Carbon Monoxide (CO)	6.0 ppmvd @ 15%O2	6.9 ppmvd @ 15%O2
G. Probable Cause of Deviation: Excessive water injection into the turbine combustor reduced the combustion temperature and caused the CO emissions to increase above the permit limit. The excessive water injection was due to a high water injection bias from a previous run, which was not adjusted during the current run.	H. Corrective actions taken: Upon discovery the turbine was shut down. The water injection bias was manually adjusted during the subsequent run to maintain compliance levels.	

A. Attachment # or Permit Condition #:	B. Equipment description:	C. Deviation Period: Date & Time Begin: End: When Discovered: Date & Time
D. Parameters monitored:	E. Limit:	F. Actual:
G. Probable Cause of Deviation:	H. Corrective actions taken:	

A. Attachment # or Permit Condition #:	B. Equipment description:	C. Deviation Period: Date & Time Begin: End: When Discovered: Date & Time
D. Parameters monitored:	E. Limit:	F. Actual:
G. Probable Cause of Deviation:	H. Corrective actions taken:	

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SOURCE TEST SUMMARY FORM

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A. Emission Unit Description:			B. Pollutant:
GE LM-6000 PC SPRINT Gas Turbine			NOx
C. Measured Emission Rate:	D. Limited Emission Rate:	E. Specific Source Test or Monitoring Record Citation:	F. Test Date:
2.30 ppm @15% O2 3.87 lbs/hr	2.5 ppm @ 15%O2 50 lbs/hr	07891-T1-161, Condition 1a	7/8/19

A. Emission Unit Description:			B. Pollutant:
GE LM-6000 PC SPRINT Gas Turbine			ROC
C. Measured Emission Rate:	D. Limited Emission Rate:	E. Specific Source Test or Monitoring Record Citation:	F. Test Date:
1.02 ppm @15% O2 0.60 lbs/hr	2.0 ppm @ 15%O2 1.38 lbs/hr	07891-T1-161, Condition 1b	7/8/19

A. Emission Unit Description:			B. Pollutant:
GE LM-6000 PC SPRINT Gas Turbine			CO
C. Measured Emission Rate:	D. Limited Emission Rate:	E. Specific Source Test or Monitoring Record Citation:	F. Test Date:
3.80 ppm @15% O2 3.89 lbs/hr	6.0 ppm @ 15%O2 15.80 lbs/hr	07891-T1-161, Condition 1c	7/8/19

A. Emission Unit Description:			B. Pollutant:
GE LM-6000 PC SPRINT Gas Turbine			NH3
C. Measured Emission Rate:	D. Limited Emission Rate:	E. Specific Source Test or Monitoring Record Citation:	F. Test Date:
2.4 ppm @15% O2 1.5 lbs/hr	5.0 ppm @ 15%O2 3.44 lbs/hr	07891-T1-161, Condition 1d	7/8/19

A. Emission Unit Description:			B. Pollutant:
C. Measured Emission Rate:	D. Limited Emission Rate:	E. Specific Source Test or Monitoring Record Citation:	F. Test Date:

Attachment 1

Emissions and natural gas usage record

Monthly Emissions - Averages & Totals Report
Southern California Edison - McGrath Beach Substation
251 N. Harbor Blvd., Oxnard, Ca 93035
Report Period 1/1/2019 00:00 to 12/30/2019 23:59
Generated: 2/11/2020

Source: Simple Cycle Combustion Turbine
CEMS ID NO.:

Monthly Summary - worksheet 1

MM/YYYY	Process On Mo-To-Date (Hours/mo)	NOx Mo-To-Date (lbs/mo)	CO Mo-To-Date (lbs/mo)	PM10 Mo-To-Date (lbs/mo)	ROC Mo-To-Date (lbs/mo)	SOX Mo-To-Date (lbs/mo)	Gas Flow Mo-To-Date (MMcft/mo)	Gross MW Mo-To-Date (MW.Hrs/mo)
Jan 2019	22.28	154.63	122.88	100	26	6	9.460	1008.3
Feb 2019	37.97	203.82	183.59	176	45	10	16.647	1806.7
Mar 2019	44.32	219.17	208.82	206	53	12	19.542	2115.8
Apr 2019	26.57	157.58	122.06	120	31	7	11.400	1216.5
May 2019	1.18	8.15	7.53	5	1	0	0.441	45.3
Jun 2019	14.00	59.86	54.76	64	16	4	6.051	651.8
Jul 2019	48.67	193.30	224.95	228	58	13	21.573	2316.1
Aug 2019	46.52	191.85	208.60	216	55	12	20.443	2183.1
Sep 2019	19.30	79.75	87.41	87	22	5	8.241	876.5
Oct 2019	60.72	265.58	307.94	272	70	15	25.792	2741.9
Nov 2019	108.40	458.31	559.83	498	127	28	47.151	5048.4
Dec 2019	13.20	59.24	60.41	61	15	3	5.734	624.0
Final Values	**443.13**	**2051.24**	**2148.78**	**2033.00**	**519.00**	**115.00**	**192.48**	**20634.40**
		1.03 Tons	**1.07 Tons**	**1.02 Tons**	**0.26 Tons**	**0.06 Tons**		

Monthly Emissions - Averages & Totals Report
Southern California Edison - McGrath Beach Substation
251 N. Harbor Blvd., Oxnard, Ca 93035
Report Period 1/1/2018 00:00 to 12/31/2018 23:59
Generated: 2/4/2019

Source: Simple Cycle Combustion Turbine
CEMS ID NO.:

Monthly Summary - worksheet 2

MM/YYYY	NOx 12Mo_Total (lbs/12mo)	CO 12Mo_Total (lbs/12mo)	PM10 12Mo_Total (lbs/12mo)	ROC 12Mo_Total (lbs/12mo)	SOX 12Mo_Total (lbs/12mo)	Gas Flow 12Mo_Total (MMcft/12mo)
Jan 2018	4327	4270	4182	1069	238	395.989
Feb 2018	4030	4033	3977	1017	226	376.575
Mar 2018	3851	3870	3826	978	217	362.300
Apr 2018	3491	3515	3497	894	199	331.139
May 2018	2879	2931	2954	755	168	279.749
Jun 2018	2309	2380	2376	607	135	224.992
Jul 2018	2437	2692	2585	661	147	244.829
Aug 2018	2004	2264	2101	537	119	198.956
Sep 2018	2228	2506	2274	581	129	215.336
Oct 2018	2518	2763	2522	645	143	238.835
Nov 2018	2795	3066	2765	707	157	261.823
Dec 2018	2523	2773	2461	629	140	233.071
Final Values	2523 L	2773 L	2461 L	629 L	140 L	233.071 L

Attachment 2

CEMS Maintenance Records

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station

Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

ANNUAL QA/QC INSPECTIONS	
Date	5/28/19
Techecian's Initial:	

Parameters to Check		Values/Status
TECO MODEL 421i-LS NOx		
	Clean the lens in the reaction chamber s needed	✓
	Perform a NOx converter check. Replace the converter as necessary	Replaced
	Inspect and Clean cooler fins on PMT cooler	✓
	Check sample pump A - Replace diaphram and disk as needed	✓
	Check sample pump B - Replace diaphram and disk as needed	✓
	Replace capillaries and O-rings	✓
SERVOMEX MODEL 1440D O2 Analyzer		
	Check filter element at Flow Control Device, replace as needed	✓
	Check for leaks	✓
TECO MODEL 48I CO Analyzer		
	Replace IR Source (as needed)	✓
	Clean correlation wheel, optics, and measuring cell, as necessary	✓
	Check for leaks around fittings	✓
	Check pump diaphram and replace as necessary	✓
	Replace capillary	✓
	Clean fan filter	✓
Sample System Checks		
	Check sample pump A tubing - Replace diaphram and disk as needed	✓
	Check sample pump B tubing - Replace diaphram and disk as needed	✓
	Perform probe maintenance, inspect filter and O-rings and replace as necessary	✓
	Adjust 4-20 mA outputs (analog) tomatch LED display for all analyzers	✓
	Replace ammonia scrubber media	✓
	Replace peristaltic pump diaphram	✓
	Replace dry air dessicant	✓

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required
Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By: _____ **Date:** _____

revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station

Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

QUARTERLY QA/QC INSPECTIONS					
		First Quarter	Scond Quarter	Third Quarter	Fourth Quarter
	Date	3/25/19	6/5/19	9/23/19	12/16/19
	Techecian's Initial:				
Parameters to Check					
SAMPLE SYSTEMS CHECK:					
Inspect sample gas pressure. If sample gas pressure shows a decline, peform one or more of the following:		✓	✓	✓	✓
	Perform probe manintenance	—	—	—	—
	Relace filter element and clean the filter chamber	—	—	—	—
	Verify if proble box heater is operating	✓	✓	✓	✓
	If flow is low check sample pump	—	—	—	—
	Perform CEMS sample system leak check	—	—	—	—
	Perform general housekeeping duties. Dust/clean all equipment surfaces.	✓	✓	✓	✓
Anaylzer Checks					
All Analyzers:	Visually check for obvious defects such as loose connectors, loose fittings, cracked or clogged teflon lines, and excessive dust or dirt accumulation. Dirt accumulation can cause overheating or component failure and may provide conducting path for electricity	✓	✓	✓	✓
	Clean inside of each instrument by vacuuming	✓	✓	✓	✓
	Clean all analyzer cooling fans	✓	✓	✓	✓
	Caution: Observe all safety warning from manufactuers manual	✓	✓	✓	✓

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By: _____ **Date:** _____

revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station

Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

MONTHLY QA/QC INSPECTIONS													
Parameters to Check		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Date		1/31/19	2/26/19	3/25/19	4/29/19	5/29/19	6/24/19	7/31/19	8/26/19	9/23/19	10/29/19	11/20/19	12/11/19
Technician's Initial:		JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD
Unit ID Number		5	5	5	G	5	5	5	G	5	5	5	5
Sample System Checks													
Check NOx analyzer desiccant media. Replace as necessary		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Check filter on shelter HVAC system. Clean or replace as needed.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Plan for the upcoming linearity/CGA. Check gas bottles pressures >500 psig. Also check expiration dates. Order new gas bottles as needed keeping in mind the lead time may be several weeks		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Check incoming instrument air filter		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOx Analyzer													
Motherboard - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interface Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PMT Voltage		-676.4	-676.0	-676.4	-676.0	-676.4	-676.4	-676.4	-676.4	-676.4	-676.4	-676.4	-676.4
I/O Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperatures:	Set Point/Range												
Internal	15.0 to 45.0 deg C	35.3	35.5	34.9	35.2	35.6	36.5	36.7	36.5	36.3	36.2	36.7	35.6
Chamber	48.0 to 52.0 deg C	50.2	49.8	50.2	50.1	50.0	50.2	50.3	50.0	50.1	50.2	50.3	50.2
Cooler	*-10 to -1.0 deg C	-2.9	-2.9	-3.1	-2.9	-2.7	-2.8	-2.7	-3.0	-2.9	-3.1	-2.9	-2.7
NOx Converter	615.0 to 650 deg C	625.8	625.6	626.6	619.8	627.1	623.5	623.7	621.9	621.4	622.4	624.8	624.3
Other:	Set Point/Range												
Chamber Pressure	100.0 to 200.0 mmHG	138.9	139.5	140.7	138.3	156.7	156.4	155.6	153.8	153.5	152.6	150.8	153.5
Ozonator Flow	>0.050 LPM	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Alarms Detected		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
CO Analyzer													
Motherboard - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interface Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bias Supply Voltage	-130V to -100V	-110.7	-110.7	-110.7	-110.7	-110.8	-110.8	-110.8	-110.8	-110.7	-110.7	-110.8	-110.7
I/O Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperatures:	Set Point/Range												
Internal	8.0 to 47.0 deg C	32.5	32.4	32.5	33.1	32.9	33.2	33.3	33.1	33.8	32.8	33.1	33.4
Bench	40.0 to 59.0 deg C	48.5	47.9	48.2	47.9	47.8	47.9	48.5	48.2	48.0	48.1	47.8	48.5
Other:	Set Point/Range												
Analyzer Pressure	250.0 to 1000.0 mmHG	747.0	749.7	751.8	745.8	744.9	746.4	747.9	746.1	747.0	744.7	737.8	751.5
Sample Flow Rate	0.35 to 1.5 LPM	0.909	0.905	0.912	0.901	1.025	1.002	1.021	0.996	0.992	0.989	0.976	0.989
Sample Ratio		1.1570500	1.1566200	1.1523000	1.1560000	1.1762600	1.1761600	1.1759300	1.1755600	1.1753100	1.1747400	1.1745200	1.1714100
AGC Intensity	150KHZ to 300KHZ	198715	199166	199119	199267	198897	198728	198369	198578	198611	198619	198943	198617
Motor Speed		100	100	100	100	100	100	100	100	100	100	100	100
Alarms Detected		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
NOx/NH3 Analyzer													
Motherboard - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interface Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PMT Voltage		-600.9	-601.3	-600.9	-601.3	-601.3	-600.9	-601.3	-601.3	-601.3	601.3	-601.3	-600.9
I/O Board - Voltages - Check status and ensure normal operation		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperatures:	Set Point/Range												
Internal	15.0 to 45.0 deg C	32.5	32.3	32.7	33.1	33.0	32.9	33.0	32.9	33.9	33.1	33.2	33.6
Chamber	48.0 to 52.0 deg C	50.1	50.1	50.2	50.3	49.9	50.3	49.9	49.8	50.1	50.2	50.2	50.2
Cooler	*-10 to -1.0 deg C	-2.7	-3.1	-2.7	-2.9	-2.7	-2.7	-3.1	-2.8	-2.7	-2.8	-2.6	-2.9
NOx Converter	615.0 to 650 deg C	625.6	622.4	623.2	625.6	622.2	623.5	624.0	622.2	625.8	622.2	622.4	621.9
Other:	Set Point/Range												
Chamber Pressure	100.0 to 200.0 mmHG	162.3	162.9	163.5	161.7	169.1	169.1	170.5	165.7	169.7	168.8	167.0	169.7
Ozonator Flow	>0.050 LPM	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Alarms Detected		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required
Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By: ____________________ Date: ____________________

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates						1/3/19			
Technician's Initial						JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi				1110			
NOX Low Span/CO Low Span	SV2	>150 psi				1730			
NOX High Span, O2/CO Zero	SV3	>150 psi				760			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F				250			
Sample NH3 Temperature -	TC2	760°F				760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg				6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg				4.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg				6.6			
Sample Line Pressure	PI-5	8 Psi				5.6			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)				✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)				✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F				68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter				✓			
Moisture Sensor B/Filter	MS-2					✓			
Operational Status of Sample Pumps (2)		Check if ok				✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok				✓			
Check LED status of Sample Cooler		Check if ok				✓			
NH3 Scrubber Drain	HV-4	Drain as needed				✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM				4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM				1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM				1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM				1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM				1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM				4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM				1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM				1.55			
NOX Dry Air	FM-10	500- 700 CCM				580			
DAHS Checks						✓			
Check DAHS for normal operation. Is system logging data?						✓			
Check Alarms in DAHS.						✓			
Check chart recorder for normal operation						✓			
Check analyzer calibration drift. Did all calibrations pass?						✓			
Check printer status									

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			1/7/19	1/8/19	1/9/19	1/10/19	1/11/19		
Technician's Initial			JO	JO	JO	JO	JO		
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1020	1080	970	940	930		
NOX Low Span/CO Low Span	SV2	>150 psi	1700	1690	1680	1690	1690		
NOX High Span, O2/CO Zero	SV3	>150 psi	340	330	330	320	320		
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250	250		
Sample NH3 Temperature -	TC2	760°F	760	760	760	760	760		
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.4	6.3	6.2	6.2		
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.8	4.8	4.7	4.7	4.6		
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6	6.6		
Sample Line Pressure	PI-5	8 Psi	5.5	5.5	5.5	5.5	5.5		
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√	√		
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√	√		
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	68.5	68.5	68.0	67.0		
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√	√		
Moisture Sensor B/Filter	MS-2		√	√	√	√	√		
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√	√		
Operational Status of Condendale Drain Pumps (2)		Check if ok	√	√	√	√	√		
Check LED status of Sample Cooler		Check if ok	√	√	√	√	√		
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√	√		
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.4	4.4	4.4	4.4	4.3		
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.4	1.45	1.4	1.4	1.45		
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6	1.6		
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.45	1.4	1.35	1.35		
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.53	1.55	1.55	1.45		
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.2	4.2	4.2	4.2		
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6	1.6		
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.53	1.55	1.55	1.53		
NOX Dry Air	FM-10	500- 700 CCM	570	570	570	570	570		
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√	√		
Check Alarms in DAHS.			√	√	√	√	√		
Check chart recorder for normal operation			√	√	√	√	√		
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√	√		
Check printer status			√	√	√	√	√		

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			1/14/19	1/15/19	1/16/19	1/17/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	760	720	730	700			
NOX Low Span/CO Low Span	SV2	>150 psi	1620	1580	1500	1440			
NOX High Span, O2/CO Zero	SV3	>150 psi	1820	1800	1840	1810			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.9	6.9	6.1	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.7	4.7	4.8	4.8			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	7.0	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.7	5.5	5.5	5.5			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	68.5	66.5	67.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendale Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.1	4.4	4.4	4.4			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.4	1.45	1.45	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.45	1.45	1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	3.9	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.55	1.55	1.55			
NOX Dry Air	FM-10	500- 700 CCM	570	570	570	570			
DAHS Checks									
Check DAHS for nomal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates				1/22/19	1/23/19	1/24/19			
Technician's Initial				JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi		690	590	560			
NOX Low Span/CO Low Span	SV2	>150 psi		1340	1380	1310			
NOX High Span, O2/CO Zero	SV3	>150 psi		1710	1740	1680			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F		250	250	250			
Sample NH3 Temperature -	TC2	760°F		760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg		6.1	6.1	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg		4.7	4.9	4.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg		6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi		5.6	5.6	5.5			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)		✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)		✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F		67.5	66.5	67.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, If filter shows buildup and flow levels are dropping, replace filter		✓	✓	✓			
Moisture Sensor B/Filter	MS-2			✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok		✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok		✓	✓	✓			
Check LED status of Sample Cooler		Check if ok		✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed		✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM		4.4	4.4	4.4			
O2 Analyzer	FM-2	1.2 - 1.7 LPM		1.45	1.4	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM		1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM		1.35	1.45	1.4			
CO Analyzer	FM-5	1.2 - 1.7 LPM		1.55	1.55	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM		4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM		1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM		1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM		650	650	650			
DAHS Checks				✓	✓	✓			
Check DAHS for normal operation. Is system logging data?				✓	✓	✓			
Check Alarms in DAHS.				✓	✓	✓			
Check chart recorder for normal operation				✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?				✓	✓	✓			
Check printer status									

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

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Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			1/28/19	1/29/19	1/30/19	1/31/19			
Technician's Initial			JC	JC	JC	JC			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	440	460	410	420			
NOX Low Span/CO Low Span	SV2	>150 psi	1180	1230	1160	1170			
NOX High Span, O2/CO Zero	SV3	>150 psi	1530	1610	1510	1520			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.8	6.5	6.4	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.3	4.5	4.4	4.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	7.0	6.9	6.7	6.7			
Sample Line Pressure	PI-5	8 Psi	5.3	5.4	5.3	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	69.0	67.0	68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√			
Moisture Sensor B/Filter	MS-2		√	√	√	√			
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√			
Operational Status of Condendate Drain Pumps (2)		Check if ok	√	√	√	√			
Check LED status of Sample Cooler		Check if ok	√	√	√	√			
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.3	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.4	1.4	1.45	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.6	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.4	1.35	1.35			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.53	1.55	1.55	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.55			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√			
Check Alarms in DAHS.			√	√	√	√			
Check chart recorder for normal operation			√	√	√	√			
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√			
Check printer status			√	√	√	√			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

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Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			2/4/19	2/5/19	2/6/19	2/7/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order.								
O2/CO High Span, NOX Zero	SV1	>150 psi	310	270	270	1990			
NOX Low Span/CO Low Span	SV2	>150 psi	1140	1000	1040	1010			
NOX High Span, O2/CO Zero	SV3	>150 psi	1510	1500	1410	1370			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	7.2	7.1	6.5			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.4	3.6	4.2	4.2			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	7.4	7.6	6.9			
Sample Line Pressure	PI-5	8 Psi	5.3	5.2	5.5	5.3			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.5	69.2	67.0	70.2			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.7	4.2	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.4	1.4	1.4	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.7	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.53	1.55			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.55	1.5	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	3.9	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	660			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			2/11/19	2/12/19	2/13/19	2/14/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1730	1680	1620	1600			
NOX Low Span/CO Low Span	SV2	>150 psi	1000	980	980	980			
NOX High Span, O2/CO Zero	SV3	>150 psi	1360	1330	1320	1330			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.4	6.3	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.2	4.2	4.1	4.0			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	6.7	6.6	6.9			
Sample Line Pressure	PI-5	8 Psi	5.5	5.4	5.4	5.2			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	70.0	68.5	67.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.45	1.5	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.7	1.7	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.55	1.6	1.45	1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	660	660	660	660			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates				2/19/19	2/20/19	2/21/19			
Technician's Initial				JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi		1480	1330	1380			
NOX Low Span/CO Low Span	SV2	>150 psi		970	880	910			
NOX High Span, O2/CO Zero	SV3	>150 psi		1300	1210	1270			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F		250	250	250			
Sample NH3 Temperature -	TC2	760°F		760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg		6.2	6.3	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg		4.2	4.2	4.0			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg		6.6	6.6	6.8			
Sample Line Pressure	PI-5	8 Psi		5.5	5.4	5.1			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)		✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)		✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F		68.5	68.0	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter		✓	✓	✓			
Moisture Sensor B/Filter	MS-2			✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok		✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok		✓	✓	✓			
Check LED status of Sample Cooler		Check if ok		✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed		✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM		4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM		1.45	1.5	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM		1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM		1.45	1.55	1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM		1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM		4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM		1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM		1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM		660	660	660			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?				✓	✓	✓			
Check Alarms in DAHS.				✓	✓	✓			
Check chart recorder for normal operation				✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?				✓	✓	✓			
Check printer status				✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			2/25/19	2/26/19	2/27/19	2/28/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order.								
O2/CO High Span, NOX Zero	SV1	>150 psi	1260	1210	1177	1160			
NOX Low Span/CO Low Span	SV2	>150 psi	890	860	830	820			
NOX High Span, O2/CO Zero	SV3	>150 psi	1240	1210	1200	1200			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.4	6.3	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.3	4.2	4.4	4.3			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.8			
Sample Line Pressure	PI-5	8 Psi	5.4	5.4	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	69.0	69.2	69.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.4			
Oz Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.65	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.65	1.65	1.6	1.55			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	660	660	660	660			
DAHS Checks			✓	✓	✓	✓			
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			3/4/19	3/5/19	3/6/19	3/7/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1070	940	930	920			
NOX Low Span/CO Low Span	SV2	>150 psi	800	680	660	680			
NOX High Span, O2/CO Zero	SV3	>150 psi	1160	1020	1000	1000			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.4	6.5	6.5			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.1	4.2	4.2	4.3			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.7	6.7			
Sample Line Pressure	PI-5	8 Psi	5.4	5.4	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	68.0	65.0	65.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√			
Moisture Sensor B/Filter	MS-2		√	√	√	√			
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√			
Operational Status of Condendate Drain Pumps (2)		Check if ok	√	√	√	√			
Check LED status of Sample Cooler		Check if ok	√	√	√	√			
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.65	1.65			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.5	1.45	1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.45	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	590	580	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√			
Check Alarms in DAHS.			√	√	√	√			
Check chart recorder for normal operation			√	√	√	√			
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√			
Check printer status			√	√	√	√			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			3/11/19	3/12/19	3/13/19	3/14/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	850	830	900	900			
NOX Low Span/CO Low Span	SV2	>150 psi	640	630	610	620			
NOX High Span, O2/CO Zero	SV3	>150 psi	970	970	950	970			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.6	6.3	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.1	4.0	4.2	4.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.8	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.4	5.3	5.4	5.5			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	68.5	69.0	69.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O_2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NO_x Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.45	1.45	1.45			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	580	580	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓				
Check Alarms in DAHS			✓	✓	✓				
Check chart recorder for normal operation			✓	✓	✓				
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓				
Check printer status			✓	✓	✓				

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			3/18/19	3/19/19	3/20/19	3/21/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	760	700	700	700			
NOX Low Span/CO Low Span	SV2	>150 psi	590	530	550	530			
NOX High Span, O2/CO Zero	SV3	>150 psi	930	890	900	900			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.5	6.3	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.1	4.4	4.3	4.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	6.7	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.4	5.3	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	70.0	70.0	68.0	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.6	4.4	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.65	1.6	1.6			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.65	1.5	1.35			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.45	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	580	580	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			3/25/19	3/26/19	3/27/19	3/28/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	660	640	570	570			
NOX Low Span/CO Low Span	SV2	>150 psi	520	510	420	430			
NOX High Span, O2/CO Zero	SV3	>150 psi	890	870	430	830			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.4	6.7	6.5			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.4	4.4	4.1	4.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	6.6	6.9	6.7			
Sample Line Pressure	PI-5	8 Psi	5.4	5.4	5.2	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	68.0	69.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.6			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.7			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.6	1.5	1.45	1.7			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.0	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	580	570	570	570			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			4/1/19	4/2/19	4/3/19	4/4/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	520	510	520	2010			
NOX Low Span/CO Low Span	SV2	>150 psi	400	370	380	1410			
NOX High Span, O2/CO Zero	SV3	>150 psi	400	770	780	730			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.5	6.4	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.2	4.4	4.4	4.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	6.7	6.6	6.7			
Sample Line Pressure	PI-5	8 Psi	5.3	5.4	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	68.0	67.5	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.55	1.35	1.5			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	550	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates						4/11/19			
Technician's Initial						[illegible]			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi				1880			
NOX Low Span/CO Low Span	SV2	>150 psi				1870			
NOX High Span, O2/CO Zero	SV3	>150 psi				680			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F				250			
Sample NH3 Temperature -	TC2	760°F				760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg				6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg				4.0			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg				1.8			
Sample Line Pressure	PI-5	8 Psi				5.3			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)				✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)				✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F				69.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter				✓			
Moisture Sensor B/Filter	MS-2					✓			
Operational Status of Sample Pumps (2)		Check if ok				✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok				✓			
Check LED status of Sample Cooler		Check if ok				✓			
NH3 Scrubber Drain	HV-4	Drain as needed				✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM				4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM				1.4			
NOx Analyzer	FM-3	1.2 - 1.7 LPM				1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM				1.75			
CO Analyzer	FM-5	1.2 - 1.7 LPM				1.45			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM				4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM				1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM				1.5			
NOX Dry Air	FM-10	500- 700 CCM				650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?						✓			
Check Alarms in DAHS.						✓			
Check chart recorder for normal operation						✓			
Check analyzer calibration drift. Did all calibrations pass?						✓			
Check printer status						✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			4/15/19	4/16/19	4/17/19	4/18/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1660	1450	1630	1630			
NOX Low Span/CO Low Span	SV2	>150 psi	1710	1730	1720	1760			
NOX High Span, O2/CO Zero	SV3	>150 psi	580	580	580	580			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.2	6.2	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.0	4.2	4.3	4.2			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.8	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.4	5.4	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	67.5	67.5	70.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.35	1.45	1.35			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.45	1.45	1.45	1.4			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			4/22/19	4/23/19	4/24/19	4/25/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1480	1500	1460	1460			
NOX Low Span/CO Low Span	SV2	>150 psi	1630	1680	1638	1610			
NOX High Span, O2/CO Zero	SV3	>150 psi	520	500	500	480			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.1	6.2	6.2			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.2	4.1	4.1	4.1			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.4	5.4	5.4	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓		✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.5	68.0	68.5	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.4	4.4	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.45	1.4	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.35	1.4	1.35			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.4	1.4	1.4	1.4			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

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Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID.	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			4/29/19	4/30/19	5/1/19	5/2/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1700	1570	1260	1260			
NOX Low Span/CO Low Span	SV2	>150 psi	1570	1570	1500	1560			
NOX High Span, O2/CO Zero	SV3	>150 psi	420	420	380	380			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.7	6.4	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.2	4.7	4.7	4.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.7	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.4	5.5	5.5	5.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	68.0	68.0	67.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, nuplace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.5	4.5	4.5			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.7	1.7	1.7	1.7			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65	1.65	1.65			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.45	1.55	1.5			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.4	1.4	1.4	1.4			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6	1.6	1.6			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5	1.5	1.5			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	640			
DAHS Checks									
Check DAHS for nomal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

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Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			5/6/19	5/7/19					
Technician's Initial			JO	JO					
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1220	1170					
NOX Low Span/CO Low Span	SV2	>150 psi	1500	1470					
NOX High Span, O2/CO Zero	SV3	>150 psi	2020	1970					
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250					
Sample NH3 Temperature -	TC2	760°F	760	760					
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.1					
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.7	4.3					
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6					
Sample Line Pressure	PI-5	8 Psi	5.4 ✓	5.4 ✓					
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓					
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓					
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.5	68.5 ✓					
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓					
Moisture Sensor B/Filter	MS-2		✓	✓					
Operational Status of Sample Pumps (2)		Check if ok	✓	✓					
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓					
Check LED status of Sample Cooler		Check if ok	✓	✓					
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓					
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.5	4.4					
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.75	1.75					
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.65	1.65					
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.55	1.55					
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.4	1.5					
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.2					
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.6					
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5					
NOX Dry Air	FM-10	500- 700 CCM	650	650					
DAHS Checks									
Check DAHS for nomal operation. Is system logging data?			✓	✓					
Check Alarms in DAHS.			✓	✓					
Check chart recorder for normal operation			✓	✓					
Check analyzer calibration drift. Did all calibrations pass?			✓	✓					
Check printer status			✓	✓					

REMARKS:

Mark as either **Acceptable "√", Corrective action Required "X", or Actual Readings, where required**

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			5/13/19	5/14/19					
Technician's Initial									
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order.								
O2/CO High Span, NOX Zero	SV1	>150 psi	1470	1440					
NOX Low Span/CO Low Span	SV2	>150 psi	1440	1430					
NOX High Span, O2/CO Zero	SV3	>150 psi	1990	1980					
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250					
Sample NH3 Temperature -	TC2	760°F	760	760					
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.1	6.1					
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	8.0	8.0					
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6					
Sample Line Pressure	PI-5	8 Psi	5.4	5.4					
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓					
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓					
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	68.5					
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓					
Moisture Sensor B/Filter	MS-2		✓	✓					
Operational Status of Sample Pumps (2)		Check if ok	✓	✓					
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓					
Check LED status of Sample Cooler		Check if ok	✓	✓					
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓					
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.4					
O_2 Analyzer	FM-2	1.2 - 1.7 LPM	1.7	1.75					
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6					
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.45	1.45					
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.45					
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.3	4.2					
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.6	1.55					
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.5	1.5					
NOX Dry Air	FM-10	500- 700 CCM	650	650					
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓					
Check Alarms in DAHS.			✓	✓					
Check chart recorder for normal operation			✓	✓					
Check analyzer calibration drift. Did all calibrations pass?			✓	✓					
Check printer status			✓	✓					

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			5/20/17	5/21/17	5/22/17	5/23/17			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1470	900	900	880			
NOX Low Span/CO Low Span	SV2	>150 psi	1320	1290	1280	1280			
NOX High Span, O2/CO Zero	SV3	>150 psi	1830	1800	1790	1800			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.4	6.2	6.0			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	6.7	6.1	5.5	5.1			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	7.2	6.7	7.3	7.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	68.5	69.0	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√			
Moisture Sensor B/Filter	MS-2		√	√	√	√			
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√			
Operational Status of Condendate Drain Pumps (2)		Check if ok	√	√	√	√			
Check LED status of Sample Cooler		Check if ok	√	√	√	√			
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.0	4.0	4.1	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.4	1.4	1.4	1.35			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.2	1.2	1.2	1.2			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.4	1.4	1.45	1.4			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.2	4.2	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.55	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	560	540	550	550			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√			
Check Alarms in DAHS.			√	√	√	√			
Check chart recorder for normal operation			√	√	√	√			
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√			
Check printer status			√	√	√	√			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

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Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates				5/28/19	5/29/19				
Technician's Initial				JD	JD				
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi		830	800				
NOX Low Span/CO Low Span	SV2	>150 psi		1210	1220				
NOX High Span, O2/CO Zero	SV3	>150 psi		1780	1740				
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F		250	250				
Sample NH3 Temperature -	TC2	760°F		760	760				
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg		6.1	6.1				
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg		8.0	8.0				
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg		6.6	6.5				
Sample Line Pressure	PI-5	8 Psi		7.4	7.3				
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)		✓	✓				
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)							
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F		67.5	67.0				
Moisture Sensor A/Filter	MS-1	Clean and dry. If filter shows buildup and flow levels are dropping, replace filter		✓	✓				
Moisture Sensor B/Filter	MS-2			✓	✓				
Operational Status of Sample Pumps (2)		Check if ok		✓	✓				
Operational Status of Condendate Drain Pumps (2)		Check if ok		✓	✓				
Check LED status of Sample Cooler		Check if ok		✓	✓				
NH3 Scrubber Drain	HV-4	Drain as needed		✓	✓				
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM		3.5	3.9				
O2 Analyzer	FM-2	1.2 - 1.7 LPM		1.35	1.35				
NOx Analyzer	FM-3	1.2 - 1.7 LPM		1.45	1.45				
NOX By-Pass	FM-4	1.2 - 1.7 LPM		1.2	1.2				
CO Analyzer	FM-5	1.2 - 1.7 LPM		1.4	1.4				
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM		4.2	4.1				
NOX/NH3 Analyzer	FM-8	1.5 LPM		1.45	1.45				
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM		1.35	1.33				
NOX Dry Air	FM-10	500- 700 CCM		650	650				
DAHS Checks									
Check DAHS for normal operation. Is system logging data?				✓	✓				
Check Alarms in DAHS.				✓	✓				
Check chart recorder for normal operation				✓	✓				
Check analyzer calibration drift. Did all calibrations pass?				✓	✓				
Check printer status				✓	✓				

REMARKS:

Mark as either **Acceptable "√", Corrective action Required "X", or Actual Readings, where required**

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			6/3/19	6/4/19	6/5/19	6/6/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	770	700	690	690			
NOX Low Span/CO Low Span	SV2	>150 psi	1730	1170	1160	1160			
NOX High Span, O2/CO Zero	SV3	>150 psi	1760	1730	1730	1730			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.1	6.2	6.2	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.2	5.4	5.7	5.3			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.3			
Sample Line Pressure	PI-5	8 Psi	7.4	7.4	7.4	7.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.5	68.0	69.0	69.0			
Moisture Sensor A/Filter	MS-1	Clean and dry. If filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.0	4.3	4.2	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.6	1.55	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.55	1.55	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.25	1.3	1.3	1.25			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.4	1.55	1.5	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.1	4.2	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.4	1.35			
NOX Dry Air	FM-10	500- 700 CCM	600	600	600	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates					6/13/19	6/13/19			
Technician's Initial					[illegible]	[illegible]			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi			650	660			
NOX Low Span/CO Low Span	SV2	>150 psi			1110	1120			
NOX High Span, O2/CO Zero	SV3	>150 psi			1700	1710			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F			250	250			
Sample NH3 Temperature -	TC2	760°F			760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg			6.1	6.2			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg			5.3	5.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg			6.6	6.6			
Sample Line Pressure	PI-5	8 Psi			7.4	7.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)			✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)			✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F			66.5	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter			✓	✓			
Moisture Sensor B/Filter	MS-2				✓	✓			
Operational Status of Sample Pumps (2)		Check if ok			✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok			✓	✓			
Check LED status of Sample Cooler		Check if ok			✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed			✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM			4.0	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM			1.45	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM			1.5	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM			1.25	1.25			
CO Analyzer	FM-5	1.2 - 1.7 LPM			1.45	1.45			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM			4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM			1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM			1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM			580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?					✓	✓			
Check Alarms in DAHS.					✓	✓			
Check chart recorder for normal operation					✓	✓			
Check analyzer calibration drift. Did all calibrations pass?					✓	✓			
Check printer status					✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

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Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			6/24/19	6/25/19					
Technician's Initial			JD	JD					
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	600	600					
NOX Low Span/CO Low Span	SV2	>150 psi	1050	1050					
NOX High Span, O2/CO Zero	SV3	>150 psi	1670	1670					
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250					
Sample NH3 Temperature -	TC2	760°F	760	760					
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.2					
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.3	5.3					
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6					
Sample Line Pressure	PI-5	8 Psi	7.4	7.4					
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓					
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓					
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	68.5					
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓					
Moisture Sensor B/Filter	MS-2		✓	✓					
Operational Status of Sample Pumps (2)		Check if ok	✓	✓					
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓					
Check LED status of Sample Cooler		Check if ok	✓	✓					
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓					
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.1	4.1					
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.5					
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.5					
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.25	1.25					
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.45	1.45					
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1					
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45					
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35					
NOX Dry Air	FM-10	500- 700 CCM	590	590					
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓					
Check Alarms in DAHS.			✓	✓					
Check chart recorder for normal operation			✓	✓					
Check analyzer calibration drift. Did all calibrations pass?			✓	✓					
Check printer status			✓	✓					

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			7/1/19	7/2/19	7/3/19				
Technician's Initial			JD	JD	JD				
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	560	570	560				
NOX Low Span/CO Low Span	SV2	>150 psi	1020	1030	1030				
NOX High Span, O2/CO Zero	SV3	>150 psi	1630	1660	1660				
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250				
Sample NH3 Temperature -	TC2	760°F	760	760	768				
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.2	6.2	6.2				
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.4	5.2	5.3				
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6				
Sample Line Pressure	PI-5	8 Psi	7.4	7.4	7.4				
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓				
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓				
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	70.0	69.5				
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓				
Moisture Sensor B/Filter	MS-2		✓	✓	✓				
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓				
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓				
Check LED status of Sample Cooler		Check if ok	✓	✓	✓				
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓				
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.1	4.1	4.0				
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.45	1.45				
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.5	1.5				
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.25	1.25	1.25				
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.45	1.5	1.5				
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1				
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45				
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.35				
NOX Dry Air	FM-10	500- 700 CCM	580	670	590				
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓				
Check Alarms in DAHS			✓	✓	✓				
Check chart recorder for normal operation			✓	✓	✓				
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓				
Check printer status			✓	✓	✓				

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			7/8/19						
Technician's Initial			JD						
Calibration Gas Pressures	Please order readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	520						
NOX Low Span/CO Low Span	SV2	>150 psi	990						
NOX High Span, O2/CO Zero	SV3	>150 psi	1110						
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250						
Sample NH3 Temperature -	TC2	760°F	760						
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.7						
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	4.9						
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6						
Sample Line Pressure	PI-5	8 Psi	7.3						
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓						
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓						
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5						
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓						
Moisture Sensor B/Filter	MS-2		✓						
Operational Status of Sample Pumps (2)		Check if ok	✓						
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓						
Check LED status of Sample Cooler		Check if ok	✓						
NH3 Scrubber Drain	HV-4	Drain as needed	✓						
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	3.9						
Oz Analyzer	FM-2	1.2 - 1.7 LPM	1.45						
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.4						
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.7						
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5						
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.7						
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45						
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35						
NOX Dry Air	FM-10	500- 700 CCM	650						
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓						
Check Alarms in DAHS.			✓						
Check chart recorder for normal operation			✓						
Check analyzer calibration drift. Did all calibrations pass?			✓						
Check printer status			✓						

REMARKS:

Mark as either Acceptable ":", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			7/15/19	7/16/19	7/17/19	7/18/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	510	510	490	490			
NOX Low Span/CO Low Span	SV2	>150 psi	990	990	980	980			
NOX High Span, O2/CO Zero	SV3	>150 psi	1620	1620	1600	1600			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.1	6.2	6.1	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.4	5.2	5.2	5.3			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	7.4	7.4	7.4	7.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	69.5	68.0	68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.1	4.0	4.0	4.0			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.45	1.45			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.2	1.25	1.25	1.25			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.55	1.55	1.5			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	640	640	650	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			7/22/19	7/23/19	7/24/19	7/25/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	440	440	380	360			
NOX Low Span/CO Low Span	SV2	>150 psi	920	860	840	910			
NOX High Span, O2/CO Zero	SV3	>150 psi	1520	1510	1460	1430			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.1	6.7	6.1	6.1			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.2	5.0	5.4	5.3			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	7.4	7.4	7.4	7.4			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	68.0	68.5	70.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4	4.0	4.0	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.45	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.45	1.45	1.5	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.25	1.2	1.25	1.25			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.5	1.5	1.45	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	3.8	4.1	4.1			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.46	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.36	1.4	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	590	590	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			7/26/19	7/30/19	7/31/19	8/1/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	310	310	310	1400			
NOX Low Span/CO Low Span	SV2	>150 psi	800	790	770	750			
NOX High Span, O2/CO Zero	SV3	>150 psi	1410	1480	1390	1380			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.1	6.3	6.4	6.2			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.4	5.5	5.5	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	7.4	7.4	7.4	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	70.0	69.5	67.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√			
Moisture Sensor B/Filter	MS-2		√	√	√	√			
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√			
Operational Status of Condendate Drain Pumps (2)		Check if ok	√	√	√	√			
Check LED status of Sample Cooler		Check if ok	√	√	√	√			
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.0	4.1	4.1	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.25	1.25	1.25	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.6	1.55	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.1	4.1	4.1	3.6			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.7	1.65	1.65	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.6	1.5	1.5	1.35			
NOX Dry Air	FM-10	500- 700 CCM	580	580	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√			
Check Alarms in DAHS.			√	√	√	√			
Check chart recorder for normal operation			√	√	√	√			
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√			
Check printer status			√	√	√	√			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator Immediately Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			8/15/19	8/16/19	8/17/19	8/18/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1400	1400	1400	1400			
NOX Low Span/CO Low Span	SV2	>150 psi	700	690	670	620			
NOX High Span, O2/CO Zero	SV3	>150 psi	1310	1290	1300	1210			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.6	6.4	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.4	5.4	5.4	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	5.9	5.5	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	70.0	69.5	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.2	4.2	4.2			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.6	1.6	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			4/12/19	4/13/19	4/14/19	4/15/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1810	1780	1730	1680			
NOX Low Span/CO Low Span	SV2	>150 psi	600	600	600	600			
NOX High Span, O2/CO Zero	SV3	>150 psi	1200	1205	1190	1190			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.3	6.4	6.4	6.3			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.0	5.5	5.5	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.9	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.8	6.0	6.0	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	70.0	70.0	69.5	68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.0	4.2	4.2	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.45	1.5	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.5	1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.6	1.6	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.4	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates					8/21/19	8/22/19			
Technician's Initial					[illegible]	[illegible]			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi			1540	1560			
NOX Low Span/CO Low Span	SV2	>150 psi			480	480			
NOX High Span, O2/CO Zero	SV3	>150 psi			1090	1090			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F			250	250			
Sample NH3 Temperature -	TC2	760°F			760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg			6.6	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg			5.5	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg			6.1	6.6			
Sample Line Pressure	PI-5	8 Psi			5.9	5.8			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)			✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)			✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F			67.5	68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter			✓	✓			
Moisture Sensor B/Filter	MS-2				✓	✓			
Operational Status of Sample Pumps (2)		Check if ok			✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok			✓	✓			
Check LED status of Sample Cooler		Check if ok			✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed			✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM			4.2	4.2			
Oz Analyzer	FM-2	1.2 - 1.7 LPM			1.55	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM			1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM			1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM			1.6	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM			4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM			1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM			1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM			600	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?					✓	✓			
Check Alarms in DAHS.					✓	✓			
Check chart recorder for normal operation					✓	✓			
Check analyzer calibration drift. Did all calibrations pass?					✓	✓			
Check printer status					✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			8/26/19	8/27/19	8/28/19	8/29/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1470	1460	1500	1500			
NOX Low Span/CO Low Span	SV2	>150 psi	310	300	310	310			
NOX High Span, O2/CO Zero	SV3	>150 psi	1030	1030	1030	1030			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.7	6.7	6.5	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.4	5.4	5.5	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	5.9	6.0	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	69.5	70.0	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.2	4.2	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.5	1.55	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.53	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.6	1.6	1.65			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.4	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.4	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	590	590	590	590			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates				9/3/19	9/4/19	9/5/19			
Technician's Initial				JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi		1330	1300	1240			
NOX Low Span/CO Low Span	SV2	>150 psi		300	240	1890			
NOX High Span, O2/CO Zero	SV3	>150 psi		980	420	850			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F		250	250	250			
Sample NH3 Temperature -	TC2	760°F		760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg		6.5	6.6	7.3			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg		5.4	5.4	5.0			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg		7.6	7.6	6.8			
Sample Line Pressure	PI-5	8 Psi		6.0	5.9	5.8			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)		✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)		✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F		68.5	70.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter		✓		✓			
Moisture Sensor B/Filter	MS-2			✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok		✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok		✓	✓	✓			
Check LED status of Sample Cooler		Check if ok		✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed		✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM		4.2	4.2	4.0			
O_2 Analyzer	FM-2	1.2 - 1.7 LPM		1.5	1.5	1.5			
NO_x Analyzer	FM-3	1.2 - 1.7 LPM		1.55	1.55	1.5			
NOX By-Pass	FM-4	1.2 - 1.7 LPM		1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM		1.6	1.6	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM		4.4	4.4	4.2			
NOX/NH3 Analyzer	FM-8	1.5 LPM		1.4	1.4	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM		1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM		680	630	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?				✓	✓	✓			
Check Alarms in DAHS.				✓	✓	✓			
Check chart recorder for normal operation				✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?				✓	✓	✓			
Check printer status				✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			9/9/19	9/10/19	9/11/19	9/12/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1160	1150	1170	1200			
NOX Low Span/CO Low Span	SV2	>150 psi	1740	1730	1735	1790			
NOX High Span, O2/CO Zero	SV3	>150 psi	840	830	850	845			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.8	6.6	6.6	6.5			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.5	5.5	5.6	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	5.9	6.0	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	69.0	68.0	70.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.2	4.2	4.2			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.5	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.6	1.65	1.65			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.4	4.4	4.4	4.4			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "\", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			9/16/19	9/17/19	9/18/19	9/19/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1150	1130	1130	1100			
NOX Low Span/CO Low Span	SV2	>150 psi	1740	1730	1730	1710			
NOX High Span, O2/CO Zero	SV3	>150 psi	820	820	820	810			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.6	6.6	6.7			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.6	5.5	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.0	5.9	5.9	5.9			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	69.5	70.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.3	4.2	4.2			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.65	1.65	1.65	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.65	1.65	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	610	600	600	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			9/23/19	9/24/19	9/25/19	9/26/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1020	1010	1020	1010			
NOX Low Span/CO Low Span	SV2	>150 psi	1580	1600	1590	1580			
NOX High Span, O2/CO Zero	SV3	>150 psi	740	760	760	740			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.7	6.7	6.7			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.6	5.4	5.5			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	5.9	5.9	5.9			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.7	69.5	69.0	70.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.7	4.7	4.7	4.7			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.65	1.5	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.65	1.55	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.65	1.6	1.65			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.4	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	590	590	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			9/30/19	10/1/19	10/2/19	10/3/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	980	970	940	900			
NOX Low Span/CO Low Span	SV2	>150 psi	1560	1580	1480	1430			
NOX High Span, O2/CO Zero	SV3	>150 psi	720	730	610	650			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.7	6.7	6.6	6.7			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.6	5.6	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	5.9	6.0	5.9			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	68.0	69.5	69.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.7	4.3	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.65	1.65	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.3			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.35			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thr	Fri	Sat	Sun
Dates			10/7/19	10/8/19	10/9/19	10/10/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	820	780	760	800			
NOX Low Span/CO Low Span	SV2	>150 psi	1330	1310	1300	1340			
NOX High Span, O2/CO Zero	SV3	>150 psi	630	610	590	620			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.9	6.9	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.5	5.5	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.0	5.9	5.9	6.2			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	70.0	70.0	67.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.2	4.2	4.2	4.2			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.7	1.7	1.7	1.7			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.6	1.55	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.35	1.35	1.4			
NOX Dry Air	FM-10	500- 700 CCM	620	610	610	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			10/14/19	10/15/19	10/16/19	10/17/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	750	710	670	670			
NOX Low Span/CO Low Span	SV2	>150 psi	1300	1280	1230	1210			
NOX High Span, O2/CO Zero	SV3	>150 psi	600	580	520	520			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.7	6.6	6.7			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.6	5.6	5.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.1	6.1	6.0	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.5	67.2	69.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.3	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.35	1.35	1.35			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.65	1.6	1.6	1.65			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.5	1.5	1.5	1.5			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	600	600	600	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			10/21/19	10/22/19	10/23/19	10/24/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	560	520	500	470			
NOX Low Span/CO Low Span	SV2	>150 psi	1030	990	1040	980			
NOX High Span, O2/CO Zero	SV3	>150 psi	400	380	340	2120			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.6	7.3	6.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.7	5.6	5.0	5.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.9	6.6			
Sample Line Pressure	PI-5	8 Psi	6.0	6.1	5.9	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	68.0	69.5	70.0	68.8			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.3	4.1	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.6	1.6			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.56	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.2	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.5	1.5	1.45	1.5			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.35	1.4			
NOX Dry Air	FM-10	500- 700 CCM	650	660	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "\", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			10/28/19	10/29/19	10/30/19				
Technician's Initial			JO	JO	JO				
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	360	340	2090				
NOX Low Span/CO Low Span	SV2	>150 psi	900	950	790				
NOX High Span, O2/CO Zero	SV3	>150 psi	2060	2020	2010				
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250				
Sample NH3 Temperature -	TC2	760°F	760	760	760				
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.7	6.2				
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.6	5.8				
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6				
Sample Line Pressure	PI-5	8 Psi	6.1	6.0	6.1				
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓				
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓				
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.0	69.5	67.5				
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓				
Moisture Sensor B/Filter	MS-2		✓	✓	✓				
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓				
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓				
Check LED status of Sample Cooler		Check if ok	✓	✓	✓				
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓				
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.3	4.3				
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55				
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.55	1.6				
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.7	1.7	1.7				
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.65	1.6	1.65				
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.4	4.4	4.4				
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45				
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.35	1.4	1.4				
NOX Dry Air	FM-10	500- 700 CCM	650	660	660				
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓				
Check Alarms in DAHS.			✓	✓	✓				
Check chart recorder for normal operation			✓	✓	✓				
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓				
Check printer status			✓	✓	✓				

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			11/4/19	11/5/19	11/6/19	11/7/19			
Technician's Initial			SD	SD	SD	SD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1700	1700	1540	1500			
NOX Low Span/CO Low Span	SV2	>150 psi	600	550	520	500			
NOX High Span, O2/CO Zero	SV3	>150 psi	1800	1800	1700	1680			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.6	6.6	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.1	5.6	5.6	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	7.1	6.5	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	5.9	6.0	6.0	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	67.5	67.5	70.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.7	4.7	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.5	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.55	1.55	1.55	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.7	1.7	1.7	1.7			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.6	1.65	1.65			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.2	4.5	4.4	4.4			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	600	600	600	600			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ Date: _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates				11/12/19	11/13/19	11/14/19			
Technician's Initial				JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi		1300	1200	1130			
NOX Low Span/CO Low Span	SV2	>150 psi		400	320	1930			
NOX High Span, O2/CO Zero	SV3	>150 psi		1560	1480	1420			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F		250	250	250			
Sample NH3 Temperature -	TC2	760°F		760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg		6.6	7.5	7.4			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg		5.6	5.7	5.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg		6.6	7.0	6.9			
Sample Line Pressure	PI-5	8 Psi		6.1	5.9	5.9			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)		✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)		✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F		70.0	69.0	68.0			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter		✓	✓	✓			
Moisture Sensor B/Filter	MS-2			✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok		✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok		✓	✓	✓			
Check LED status of Sample Cooler		Check if ok		✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed		✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM		4.2	4.2	4.1			
O2 Analyzer	FM-2	1.2 - 1.7 LPM		1.55	1.5	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM		1.55	1.55	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM		1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM		1.6	1.55	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM		4.4	4.3	4.3			
NOX/NH3 Analyzer	FM-8	1.5 LPM		1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM		1.4	1.35	1.4			
NOX Dry Air	FM-10	500- 700 CCM		590	590	590			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?				✓	✓	✓			
Check Alarms in DAHS.				✓	✓	✓			
Check chart recorder for normal operation				✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?				✓	✓	✓			
Check printer status				✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			11/18/19	11/19/19	11/20/19	11/21/19			
Technician's Initial			JD	JD	JD	JD			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1020	980	930	960			
NOX Low Span/CO Low Span	SV2	>150 psi	1780	1640	1620	1670			
NOX High Span, O2/CO Zero	SV3	>150 psi	1400	1330	1700	1330			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.6	6.8	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.5	5.1	5.4	5.6			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.5	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.0	5.9	5.9	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	√	√	√	√			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	√	√	√	√			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	70.0	68.5	69.5	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	√	√	√	√			
Moisture Sensor B/Filter	MS-2		√	√	√	√			
Operational Status of Sample Pumps (2)		Check if ok	√	√	√	√			
Operational Status of Condendate Drain Pumps (2)		Check if ok	√	√	√	√			
Check LED status of Sample Cooler		Check if ok	√	√	√	√			
NH3 Scrubber Drain	HV-4	Drain as needed	√	√	√	√			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.1	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.55	1.6	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.65	1.6	1.6	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.4	4.4	4.4	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	590	580	580	580			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			√	√	√	√			
Check Alarms in DAHS			√	√	√	√			
Check chart recorder for normal operation			√	√	√	√			
Check analyzer calibration drift. Did all calibrations pass?			√	√	√	√			
Check printer status			√	√	√	√			

REMARKS:

Mark as either Acceptable "√", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			12/3/19	12/3/19	12/4/19	12/5/19			
Technician's Initial			KJ	SO	SO	SO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	650	540	530	510			
NOX Low Span/CO Low Span	SV2	>150 psi	1340	1280	1290	1220			
NOX High Span, O2/CO Zero	SV3	>150 psi	1180	1090	1080	1030			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.7	6.7	6.5			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.7	5.5	5.5	5.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.1	6.0	6.0	6.1			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	69.5	69.0	69.5	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.3	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.35	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.55	1.6	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.4	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.5	1.45	1.46	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	580	660	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			12/9/19	12/10/19	12/11/19	12/12/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	500	480	490	470			
NOX Low Span/CO Low Span	SV2	>150 psi	1250	1200	1220	1180			
NOX High Span, O2/CO Zero	SV3	>150 psi	1050	1040	1040	970			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.6	6.4	6.5	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.6	5.7	5.7	5.4			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.1	6.1	6.1	6.1			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	70.0	67.0	70.0	69.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.7	4.7	4.7	4.7			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.5			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.55			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.55	1.6	1.55			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	650	650	650	650			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			12/16/19	12/17/19	12/18/19	12/19/19			
Technician's Initial			JO	JO	JO	JO			
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	410	490	7200	1880			
NOX Low Span/CO Low Span	SV2	>150 psi	1180	1200	1170	1060			
NOX High Span, O2/CO Zero	SV3	>150 psi	990	1010	990	940			
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250	250	250			
Sample NH3 Temperature -	TC2	760°F	760	760	760	760			
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.4	6.4	6.4	6.6			
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.7	5.9	5.7	5.7			
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6	6.6	6.6			
Sample Line Pressure	PI-5	8 Psi	6.1	6.3	6.1	6.0			
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓	✓	✓			
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓	✓	✓			
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.5	67.5	68.0	68.5			
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓	✓	✓			
Moisture Sensor B/Filter	MS-2		✓	✓	✓	✓			
Operational Status of Sample Pumps (2)		Check if ok	✓	✓	✓	✓			
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓	✓	✓			
Check LED status of Sample Cooler		Check if ok	✓	✓	✓	✓			
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓	✓	✓			
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.3	4.3	4.3			
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55	1.55	1.55			
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6	1.6	1.6			
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.3	1.3	1.3	1.3			
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.55	1.60	1.55	1.6			
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5	4.5	4.5			
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45	1.45	1.45			
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4	1.4	1.4			
NOX Dry Air	FM-10	500- 700 CCM	660	660	660	660			
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓	✓	✓			
Check Alarms in DAHS.			✓	✓	✓	✓			
Check chart recorder for normal operation			✓	✓	✓	✓			
Check analyzer calibration drift. Did all calibrations pass?			✓	✓	✓	✓			
Check printer status			✓	✓	✓	✓			

REMARKS:

Mark as either **Acceptable "✓", Corrective action Required "X", or Actual Readings, where required**

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Barre/Center/Grapeland/Miraloma/McGrath Peaker Generating Station
Daily Quality Control/Quality Assurance Plan
Checklist for CEMS Shelter Inspection

Parameters to Check	Tag ID	Limits	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dates			12/30/19	12/31/19					
Technician's Initial			[illegible]	[illegible]					
Calibration Gas Pressures	Please enter readings and notify the Maintenance Manager when it is time to re-order								
O2/CO High Span, NOX Zero	SV1	>150 psi	1440	1440					
NOX Low Span/CO Low Span	SV2	>150 psi	1010	1020					
NOX High Span, O2/CO Zero	SV3	>150 psi	900	910					
Stack Sample Line	Please enter readings								
Sample Line Temperature	TC1	250°F	250	250					
Sample NH3 Temperature -	TC2	760°F	760	760					
Sample Line Pressure/Vacuum	PI-1	6.0 "Hg	6.5	6.5					
Sample Line Pressure/Vacuum	PI-2	8.0 "Hg	5.7	5.7					
Sample Line Pressure/Vacuum	PI-4	7.5 "Hg	6.6	6.6					
Sample Line Pressure	PI-5	8 Psi	6.0	6.1					
Verify Functionality of Sample Pump A Flow Switch	FS-1	5-7 LPM (set point)	✓	✓					
Verify Functionality of Sample Pump B Flow Switch	FS-2	5-7 LPM (set point)	✓	✓					
Visual Checks									
Room Enclosre Temperature	Check HVAC controls	72 F (+/-5) F	67.0	68.5					
Moisture Sensor A/Filter	MS-1	Clean and dry, if filter shows buildup and flow levels are dropping, replace filter	✓	✓					
Moisture Sensor B/Filter	MS-2		✓	✓					
Operational Status of Sample Pumps (2)		Check if ok	✓	✓					
Operational Status of Condendate Drain Pumps (2)		Check if ok	✓	✓					
Check LED status of Sample Cooler		Check if ok	✓	✓					
NH3 Scrubber Drain	HV-4	Drain as needed	✓	✓					
Analyzer Sample Flow Meter Readings	Please enter readings								
System Flow	FM-1	3-5 LPM	4.3	4.1					
O2 Analyzer	FM-2	1.2 - 1.7 LPM	1.55	1.55					
NOx Analyzer	FM-3	1.2 - 1.7 LPM	1.6	1.6					
NOX By-Pass	FM-4	1.2 - 1.7 LPM	1.35	1.3					
CO Analyzer	FM-5	1.2 - 1.7 LPM	1.6	1.6					
Cal Gas Flow (only during Calibration)	FM-6	> than FM-1 & FM-7							
System Flow	FM-7	3-5 LPM	4.5	4.5					
NOX/NH3 Analyzer	FM-8	1.5 LPM	1.45	1.45					
NOX/NH3 Analyzer By-Pass	FM-9	1.2 - 1.5 LPM	1.4	1.4					
NOX Dry Air	FM-10	500- 700 CCM	600	600					
DAHS Checks									
Check DAHS for normal operation. Is system logging data?			✓	✓					
Check Alarms in DAHS.			✓	✓					
Check chart recorder for normal operation			✓	✓					
Check analyzer calibration drift. Did all calibrations pass?			✓	✓					
Check printer status			✓	✓					

REMARKS:

Mark as either Acceptable "✓", Corrective action Required "X", or Actual Readings, where required

Note: All deficiencies must be reported to the Control Operator immediately. Corrective Action performed shall be logged in the CEMS shelter log book.

Reviewed By Supervisor: _____ **Date:** _____

Revised 11/17

Attachment 3

CEMS Calibrations Records

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Range of Analyzers:

O2_5	O2	0.00	25.00 %	O2_5	O2	0.00	25.00 %
NOxLOW_5	NOx	0.00	10.00 ppm	NOxLOW_5	NOx	0.00	10.00 ppm
NOxHIGH_5	NOx	0.00	200.00 ppm	NOxHIGH_5	NOx	0.00	200.00 ppm
COLOW_5	CO	0.00	10.00 ppm	COLOW_5	CO	0.00	10.00 ppm
COHIGH_5	CO	0.00	200.00 ppm	COHIGH_5	CO	0.00	200.00 ppm
NOx_NH3L_5	NOx	0.00	10.00 ppm	NOx_NH3L_5	NOx	0.00	10.00 ppm
NOx_NH3H_5	NOx	0.00	200.00 ppm	NOx_NH3H_5	NOx	0.00	200.00 ppm

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	Part60 Allowable %		WD	Part75 Allowable Error %	Part75 Allowable Units	Part75 Allowable %	Gross MW_5 MW	Process On	Bottle ID	Expire Date
12/30/2019	15:47	COHIGH_5	CO	ZERO	0.00	0.06	0.06	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
12/30/2019	15:47	COHIGH_5	CO	SPAN	182.60	183.60	1.00	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			EB0078249	11/28/2027
12/26/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.22	0.22	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	50.4	100.0 %	SG9167509BAL	2/12/2027
12/26/2019	17:16	COHIGH_5	CO	SPAN	182.60	183.40	0.80	0.4	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			EB0078249	11/28/2027
12/18/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.20	0.20	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	50.3	100.0 %	SG9167509BAL	2/12/2027
12/18/2019	17:46	COHIGH_5	CO	SPAN	182.60	182.63	0.03	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			EB0078249	11/28/2027
12/17/2019	17:01	COHIGH_5	CO	ZERO	0.00	0.16	0.16	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	50.4	100.0 %	SG9167509BAL	2/12/2027
12/17/2019	17:01	COHIGH_5	CO	SPAN	183.70	183.49	-0.21	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
12/11/2019	15:06	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
12/11/2019	15:06	COHIGH_5	CO	SPAN	183.70	183.50	-0.20	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
12/04/2019	13:40	COHIGH_5	CO	ZERO	0.00	0.08	0.08	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
12/04/2019	13:40	COHIGH_5	CO	SPAN	183.70	183.38	-0.32	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
12/03/2019	09:31	COHIGH_5	CO	ZERO	0.00	0.26	0.26	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
12/03/2019	09:31	COHIGH_5	CO	SPAN	183.70	184.95	1.25	0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/26/2019	07:01	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	50.8	100.0 %	SG9167509BAL	2/12/2027
11/26/2019	07:01	COHIGH_5	CO	SPAN	183.70	184.30	0.60	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/24/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.1	100.0 %	SG9167509BAL	2/12/2027
11/24/2019	17:16	COHIGH_5	CO	SPAN	183.70	184.17	0.47	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/22/2019	14:50	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.3	100.0 %	SG9167509BAL	2/12/2027
11/22/2019	14:50	COHIGH_5	CO	SPAN	183.70	184.21	0.51	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/21/2019	12:44	COHIGH_5	CO	ZERO	0.00	0.17	0.17	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
11/21/2019	12:44	COHIGH_5	CO	SPAN	183.70	184.44	0.74	0.4	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/18/2019	17:01	COHIGH_5	CO	ZERO	0.00	0.17	0.17	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	48.7	100.0 %	SG9167509BAL	2/12/2027
11/18/2019	17:01	COHIGH_5	CO	SPAN	183.70	184.05	0.35	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/17/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.10	0.10	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.3	100.0 %	SG9167509BAL	2/12/2027
11/17/2019	17:16	COHIGH_5	CO	SPAN	183.70	184.07	0.37	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/16/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.06	0.06	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.0	100.0 %	SG9167509BAL	2/12/2027
11/16/2019	17:16	COHIGH_5	CO	SPAN	183.70	183.94	0.24	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/15/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.09	0.09	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/15/2019	17:16	COHIGH_5	CO	SPAN	183.70	183.58	-0.12	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/14/2019	06:16	COHIGH_5	CO	ZERO	0.00	0.06	0.06	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
11/14/2019	06:16	COHIGH_5	CO	SPAN	183.70	183.41	-0.29	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/13/2019	16:16	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.4	100.0 %	SG9167509BAL	2/12/2027
11/13/2019	16:16	COHIGH_5	CO	SPAN	183.70	183.38	-0.32	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/12/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/12/2019	17:16	COHIGH_5	CO	SPAN	183.70	183.74	0.04	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/11/2019	16:16	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/11/2019	16:16	COHIGH_5	CO	SPAN	183.70	183.62	-0.08	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027
11/10/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -	49.4	100.0 %	SG9167509BAL	2/12/2027
11/10/2019	17:46	COHIGH_5	CO	SPAN	183.70	183.74	0.04	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A - - N/A -			CC197991	8/19/2027

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
10/16/2019	05:16	COHIGH_5	CO	ZERO	0.00	0.23	0.23	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
10/16/2019	05:16	COHIGH_5	CO	SPAN	180.40	180.91	0.51	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/15/2019	17:11	COHIGH_5	CO	ZERO	0.00	0.19	0.19	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.3	100.0 %	CC165921	9/17/2026
10/15/2019	17:11	COHIGH_5	CO	SPAN	180.40	180.94	0.54	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/08/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.13	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
10/08/2019	18:01	COHIGH_5	CO	SPAN	180.40	180.66	0.26	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/07/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
10/07/2019	17:46	COHIGH_5	CO	SPAN	180.40	180.53	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/06/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.09	0.09	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.6	100.0 %	CC165921	9/17/2026
10/06/2019	17:16	COHIGH_5	CO	SPAN	180.40	180.18	-0.22	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/05/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.10	0.10	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.6	82.4 %	CC165921	9/17/2026
10/05/2019	17:16	COHIGH_5	CO	SPAN	180.40	179.96	-0.44	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/02/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.06	0.06	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.8	100.0 %	CC165921	9/17/2026
10/02/2019	18:01	COHIGH_5	CO	SPAN	180.40	179.75	-0.65	-0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
10/02/2019	05:24	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
10/02/2019	05:24	COHIGH_5	CO	SPAN	180.40	179.96	-0.44	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/21/2019	16:01	COHIGH_5	CO	ZERO	0.00	0.21	0.21	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/21/2019	16:01	COHIGH_5	CO	SPAN	180.40	181.49	1.09	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/18/2019	13:58	COHIGH_5	CO	ZERO	0.00	0.19	0.19	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/18/2019	13:58	COHIGH_5	CO	SPAN	180.40	181.61	1.21	0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/05/2019	14:16	COHIGH_5	CO	ZERO	0.00	0.10	0.10	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	47.9	100.0 %	CC165921	9/17/2026
09/05/2019	14:16	COHIGH_5	CO	SPAN	180.40	180.97	0.57	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/04/2019	17:01	COHIGH_5	CO	ZERO	0.00	0.13	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.1	100.0 %	CC165921	9/17/2026
09/04/2019	17:01	COHIGH_5	CO	SPAN	180.40	181.04	0.64	0.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/04/2019	05:26	COHIGH_5	CO	ZERO	0.00	0.08	0.08	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/04/2019	09:26	COHIGH_5	CO	SPAN	180.40	180.72	0.32	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/03/2019	16:46	COHIGH_5	CO	ZERO	0.00	0.25	0.25	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
09/03/2019	16:46	COHIGH_5	CO	SPAN	180.40	182.95	2.55	1.3	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/02/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.26	0.26	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.1	100.0 %	CC165921	9/17/2026
09/02/2019	17:46	COHIGH_5	CO	SPAN	180.40	182.32	1.92	1.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
09/01/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.24	0.24	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/01/2019	16:01	COHIGH_5	CO	SPAN	180.40	182.71	2.31	1.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/30/2019	14:01	COHIGH_5	CO	ZERO	0.00	0.25	0.25	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
08/30/2019	14:01	COHIGH_5	CO	SPAN	180.40	182.44	2.04	1.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/25/2019	00:40	COHIGH_5	CO	ZERO	0.00	0.20	0.20	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/25/2019	00:40	COHIGH_5	CO	SPAN	180.40	182.32	1.92	1.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/24/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.21	0.21	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.4	100.0 %	CC165921	9/17/2026
08/24/2019	17:46	COHIGH_5	CO	SPAN	180.40	182.48	2.08	1.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/19/2019	15:46	COHIGH_5	CO	ZERO	0.00	0.18	0.18	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.3	100.0 %	CC165921	9/17/2026
08/19/2019	15:46	COHIGH_5	CO	SPAN	180.40	181.95	1.55	0.8	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/15/2019	18:17	COHIGH_5	CO	ZERO	0.00	0.16	0.16	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.3	76.5 %	CC165921	9/17/2026
08/15/2019	18:17	COHIGH_5	CO	SPAN	180.40	181.68	1.28	0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/14/2019	16:28	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/14/2019	16:28	COHIGH_5	CO	SPAN	180.40	181.76	1.36	0.7	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/12/2019	14:01	COHIGH_5	CO	ZERO	0.00	0.09	0.09	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
08/12/2019	14:01	COHIGH_5	CO	SPAN	180.40	181.65	1.25	0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/08/2019	09:29	COHIGH_5	CO	ZERO	0.00	0.17	0.17	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/08/2019	09:29	COHIGH_5	CO	SPAN	180.40	181.13	0.73	0.4	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027
08/05/2019	17:31	COHIGH_5	CO	ZERO	0.00	0.26	0.26	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC165921	9/17/2026
08/05/2019	17:31	COHIGH_5	CO	SPAN	180.40	184.52	4.12	2.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC149073	3/11/2027

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
04/14/2019	19:01	COHIGH_5	CO	ZERO	0.00	0.17	0.17	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/14/2019	19:01	COHIGH_5	CO	SPAN	183.00	181.89	-1.11	-0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/13/2019	18:16	COHIGH_5	CO	ZERO	0.00	0.14	0.14	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9159413BAL	7/9/2026
04/13/2019	18:16	COHIGH_5	CO	SPAN	183.00	181.67	-1.33	-0.7	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/12/2019	05:33	COHIGH_5	CO	ZERO	0.00	0.14	0.14	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/12/2019	05:33	COHIGH_5	CO	SPAN	183.00	181.95	-1.05	-0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/11/2019	12:46	COHIGH_5	CO	ZERO	0.00	0.13	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/11/2019	12:46	COHIGH_5	CO	SPAN	183.00	181.93	-1.07	-0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/08/2019	18:46	COHIGH_5	CO	ZERO	0.00	0.13	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/08/2019	18:46	COHIGH_5	CO	SPAN	183.00	181.55	-1.45	-0.7	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/04/2019	09:56	COHIGH_5	CO	ZERO	0.00	0.09	0.09	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/04/2019	09:56	COHIGH_5	CO	SPAN	183.00	184.08	1.08	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM029052	12/13/2026
04/01/2019	18:48	COHIGH_5	CO	ZERO	0.00	0.31	0.31	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
04/01/2019	18:48	COHIGH_5	CO	SPAN	182.50	183.91	1.41	0.7	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/31/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.31	0.31	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.5	100.0 %	SG9159413BAL	7/9/2026
03/31/2019	18:01	COHIGH_5	CO	SPAN	182.50	183.74	1.24	0.6	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/27/2019	04:31	COHIGH_5	CO	ZERO	0.00	0.17	0.17	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.8	100.0 %	SG9159413BAL	7/9/2026
03/27/2019	04:31	COHIGH_5	CO	SPAN	182.50	183.22	0.72	0.4	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/26/2019	12:33	COHIGH_5	CO	ZERO	0.00	0.25	0.25	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
03/26/2019	12:33	COHIGH_5	CO	SPAN	182.50	183.21	0.71	0.4	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/18/2019	18:46	COHIGH_5	CO	ZERO	0.00	0.16	0.16	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.5	100.0 %	SG9159413BAL	7/9/2026
03/18/2019	18:46	COHIGH_5	CO	SPAN	182.50	182.34	-0.16	-0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/17/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.1	100.0 %	SG9159413BAL	7/9/2026
03/17/2019	18:01	COHIGH_5	CO	SPAN	182.50	182.52	0.02	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/16/2019	18:16	COHIGH_5	CO	ZERO	0.00	0.13	0.13	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	SG9159413BAL	7/9/2026
03/16/2019	18:16	COHIGH_5	CO	SPAN	182.50	182.49	-0.01	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/11/2019	04:16	COHIGH_5	CO	ZERO	0.00	0.10	0.10	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.7	100.0 %	SG9159413BAL	7/9/2026
03/11/2019	04:16	COHIGH_5	CO	SPAN	182.50	182.19	-0.31	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/06/2019	14:56	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
03/06/2019	14:56	COHIGH_5	CO	SPAN	182.50	182.01	-0.49	-0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/05/2019	07:33	COHIGH_5	CO	ZERO	0.00	0.31	0.31	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.5	100.0 %	SG9159413BAL	7/9/2026
03/05/2019	07:33	COHIGH_5	CO	SPAN	182.50	184.88	2.38	1.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/04/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.29	0.29	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	SG9159413BAL	7/9/2026
03/04/2019	18:01	COHIGH_5	CO	SPAN	182.50	184.88	2.38	1.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
03/02/2019	06:01	COHIGH_5	CO	ZERO	0.00	0.31	0.31	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	SG9159413BAL	7/9/2026
03/02/2019	06:01	COHIGH_5	CO	SPAN	182.50	184.49	1.99	1.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/26/2019	23:21	COHIGH_5	CO	ZERO	0.00	0.23	0.23	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.4	100.0 %	SG9159413BAL	7/9/2026
02/26/2019	23:21	COHIGH_5	CO	SPAN	182.50	184.20	1.70	0.9	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/25/2019	19:46	COHIGH_5	CO	ZERO	0.00	0.23	0.23	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	SG9159413BAL	7/9/2026
02/25/2019	19:46	COHIGH_5	CO	SPAN	182.50	184.22	1.72	0.9	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/19/2019	18:01	COHIGH_5	CO	ZERO	0.00	0.15	0.15	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.9	100.0 %	SG9159413BAL	7/9/2026
02/19/2019	18:01	COHIGH_5	CO	SPAN	182.50	183.53	1.03	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/15/2019	17:46	COHIGH_5	CO	ZERO	0.00	0.16	0.16	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	SG9159413BAL	7/9/2026
02/15/2019	17:46	COHIGH_5	CO	SPAN	182.50	183.49	0.99	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/14/2019	13:40	COHIGH_5	CO	ZERO	0.00	0.14	0.14	0.1	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
02/14/2019	13:40	COHIGH_5	CO	SPAN	182.50	183.50	1.00	0.5	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/06/2019	17:16	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.9	100.0 %	SG9159413BAL	7/9/2026
02/06/2019	17:16	COHIGH_5	CO	SPAN	182.50	182.93	0.43	0.2	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026
02/06/2019	15:00	COHIGH_5	CO	ZERO	0.00	0.05	0.05	0.0	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
02/06/2019	15:00	COHIGH_5	CO	SPAN	182.50	185.84	3.34	1.7	40.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			ALM-063377	11/26/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	Part60 Allowable %		Part75 Allowable WD	Part75 Allowable Error %	Part75 Allowable Units	Part75 Allowable %	Gross MW_5 MW	Process On	Bottle ID	Expire Date
12/03/2019	09:31	COLOW_5	CO	ZERO	0.00	0.16	0.16	1.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
12/03/2019	09:31	COLOW_5	CO	SPAN	9.05	9.31	0.26	2.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/26/2019	07:01	COLOW_5	CO	ZERO	0.00	0.09	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	50.8	100.0 %	SG9167509BAL	2/12/2027
11/26/2019	07:01	COLOW_5	CO	SPAN	9.05	9.20	0.15	1.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/24/2019	17:16	COLOW_5	CO	ZERO	0.00	0.08	0.08	0.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.1	100.0 %	SG9167509BAL	2/12/2027
11/24/2019	17:16	COLOW_5	CO	SPAN	9.05	9.19	0.14	1.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/22/2019	14:50	COLOW_5	CO	ZERO	0.00	0.07	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.3	100.0 %	SG9167509BAL	2/12/2027
11/22/2019	14:50	COLOW_5	CO	SPAN	9.05	9.20	0.15	1.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/21/2019	12:44	COLOW_5	CO	ZERO	0.00	0.08	0.08	0.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
11/21/2019	12:44	COLOW_5	CO	SPAN	9.05	9.17	0.12	1.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/18/2019	17:01	COLOW_5	CO	ZERO	0.00	0.07	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.7	100.0 %	SG9167509BAL	2/12/2027
11/18/2019	17:01	COLOW_5	CO	SPAN	9.05	9.14	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/17/2019	17:16	COLOW_5	CO	ZERO	0.00	0.03	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.3	100.0 %	SG9167509BAL	2/12/2027
11/17/2019	17:16	COLOW_5	CO	SPAN	9.05	9.14	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/16/2019	17:16	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.0	100.0 %	SG9167509BAL	2/12/2027
11/16/2019	17:16	COLOW_5	CO	SPAN	9.05	9.12	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/15/2019	17:16	COLOW_5	CO	ZERO	0.00	0.03	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/15/2019	17:16	COLOW_5	CO	SPAN	9.05	9.13	0.08	0.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
11/14/2019	06:16	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
11/14/2019	06:16	COLOW_5	CO	SPAN	8.94	9.01	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/13/2019	16:16	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.4	100.0 %	SG9167509BAL	2/12/2027
11/13/2019	16:16	COLOW_5	CO	SPAN	8.94	9.01	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/12/2019	17:16	COLOW_5	CO	ZERO	0.00	0.03	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/12/2019	17:16	COLOW_5	CO	SPAN	8.94	9.00	0.06	0.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/11/2019	16:16	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.6	100.0 %	SG9167509BAL	2/12/2027
11/11/2019	16:16	COLOW_5	CO	SPAN	8.94	9.00	0.06	0.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/10/2019	17:46	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.4	100.0 %	SG9167509BAL	2/12/2027
11/10/2019	17:46	COLOW_5	CO	SPAN	8.94	9.01	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/09/2019	17:01	COLOW_5	CO	ZERO	0.00	-0.01	-0.01	-0.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.2	100.0 %	SG9167509BAL	2/12/2027
11/09/2019	17:01	COLOW_5	CO	SPAN	8.94	8.98	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/08/2019	06:01	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	50.0	100.0 %	SG9167509BAL	2/12/2027
11/08/2019	06:01	COLOW_5	CO	SPAN	8.94	8.96	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/07/2019	06:16	COLOW_5	CO	ZERO	0.00	-0.02	-0.02	-0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
11/07/2019	06:16	COLOW_5	CO	SPAN	8.94	8.97	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/06/2019	13:46	COLOW_5	CO	ZERO	0.00	-0.01	-0.01	-0.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
11/06/2019	13:46	COLOW_5	CO	SPAN	8.94	8.93	-0.01	-0.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/06/2019	12:32	COLOW_5	CO	ZERO	0.00	0.14	0.14	1.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.0	100.0 %	SG9167509BAL	2/12/2027
11/06/2019	12:32	COLOW_5	CO	SPAN	8.94	9.18	0.24	2.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/05/2019	06:49	COLOW_5	CO	ZERO	0.00	0.12	0.12	1.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	50.1	100.0 %	SG9167509BAL	2/12/2027
11/05/2019	06:49	COLOW_5	CO	SPAN	8.94	9.15	0.21	2.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/04/2019	06:46	COLOW_5	CO	ZERO	0.00	0.09	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	50.0	100.0 %	SG9167509BAL	2/12/2027
11/04/2019	06:46	COLOW_5	CO	SPAN	8.94	9.14	0.20	2.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/03/2019	00:40	COLOW_5	CO	ZERO	0.00	0.11	0.11	1.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
11/03/2019	00:40	COLOW_5	CO	SPAN	8.94	9.11	0.17	1.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/02/2019	06:46	COLOW_5	CO	ZERO	0.00	0.09	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.9	100.0 %	SG9167509BAL	2/12/2027
11/02/2019	06:46	COLOW_5	CO	SPAN	8.94	9.10	0.16	1.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/01/2019	05:46	COLOW_5	CO	ZERO	0.00	0.06	0.06	0.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.8	100.0 %	SG9167509BAL	2/12/2027
11/01/2019	05:46	COLOW_5	CO	SPAN	8.94	9.05	0.11	1.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/31/2019	05:46	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9167509BAL	2/12/2027
10/31/2019	05:46	COLOW_5	CO	SPAN	8.94	9.05	0.11	1.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Part75 Allowable Error %	Units	%	Gross MW 5 MW	Process On	Bottle ID	Expire Date
09/04/2019	17:01	COLOW_5	CO	ZERO	0.00	0.05	0.05	0.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.1	100.0 %	CC165921	9/17/2026
09/04/2019	17:01	COLOW_5	CO	SPAN	8.97	9.00	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
09/04/2019	09:26	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/04/2019	09:26	COLOW_5	CO	SPAN	8.97	9.01	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
09/03/2019	16:46	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
09/03/2019	16:46	COLOW_5	CO	SPAN	8.97	9.16	0.19	1.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
09/02/2019	17:46	COLOW_5	CO	ZERO	0.00	0.14	0.14	1.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.1	100.0 %	CC165921	9/17/2026
09/02/2019	17:46	COLOW_5	CO	SPAN	8.97	9.14	0.17	1.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
09/01/2019	18:01	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
09/01/2019	18:01	COLOW_5	CO	SPAN	8.97	9.15	0.18	1.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/30/2019	14:01	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
08/30/2019	14:01	COLOW_5	CO	SPAN	8.97	9.13	0.16	1.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/25/2019	00:40	COLOW_5	CO	ZERO	0.00	0.10	0.10	1.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/25/2019	00:40	COLOW_5	CO	SPAN	8.97	9.10	0.13	1.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/24/2019	17:46	COLOW_5	CO	ZERO	0.00	0.12	0.12	1.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.4	100.0 %	CC165921	9/17/2026
08/24/2019	17:46	COLOW_5	CO	SPAN	8.97	9.10	0.13	1.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/19/2019	15:46	COLOW_5	CO	ZERO	0.00	0.09	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.3	100.0 %	CC165921	9/17/2026
08/19/2019	15:46	COLOW_5	CO	SPAN	8.97	9.07	0.10	1.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/15/2019	18:17	COLOW_5	CO	ZERO	0.00	0.06	0.06	0.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.3	76.5 %	CC165921	9/17/2026
08/15/2019	18:17	COLOW_5	CO	SPAN	8.97	9.05	0.08	0.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/14/2019	16:28	COLOW_5	CO	ZERO	0.00	0.06	0.06	0.6	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/14/2019	16:28	COLOW_5	CO	SPAN	8.97	9.05	0.08	0.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/12/2019	14:01	COLOW_5	CO	ZERO	0.00	0.03	0.03	0.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC165921	9/17/2026
08/12/2019	14:01	COLOW_5	CO	SPAN	8.97	9.04	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/08/2019	09:29	COLOW_5	CO	ZERO	0.00	0.04	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/08/2019	09:29	COLOW_5	CO	SPAN	8.97	8.99	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/05/2019	17:31	COLOW_5	CO	ZERO	0.00	0.12	0.12	1.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC165921	9/17/2026
08/05/2019	17:31	COLOW_5	CO	SPAN	8.97	9.04	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/04/2019	18:46	COLOW_5	CO	ZERO	0.00	0.11	0.11	1.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.3	100.0 %	CC165921	9/17/2026
08/04/2019	18:46	COLOW_5	CO	SPAN	8.97	9.06	0.09	0.9	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/02/2019	13:31	COLOW_5	CO	ZERO	0.00	0.13	0.13	1.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.6	100.0 %	CC165921	9/17/2026
08/02/2019	13:31	COLOW_5	CO	SPAN	8.97	9.02	0.05	0.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
08/01/2019	12:10	COLOW_5	CO	ZERO	0.00	0.10	0.10	1.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
08/01/2019	12:10	COLOW_5	CO	SPAN	8.97	9.01	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/28/2019	16:02	COLOW_5	CO	ZERO	0.00	0.07	0.07	0.7	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.6	100.0 %	CC165921	9/17/2026
07/28/2019	16:02	COLOW_5	CO	SPAN	8.97	9.01	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/24/2019	07:30	COLOW_5	CO	ZERO	0.00	0.04	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC165921	9/17/2026
07/24/2019	07:30	COLOW_5	CO	SPAN	8.97	8.99	0.02	0.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/23/2019	11:01	COLOW_5	CO	ZERO	0.00	0.05	0.05	0.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.4	100.0 %	CC165921	9/17/2026
07/23/2019	11:01	COLOW_5	CO	SPAN	8.97	9.22	0.25	2.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/22/2019	10:01	COLOW_5	CO	ZERO	0.00	0.04	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.9	5.9 %	CC165921	9/17/2026
07/22/2019	10:01	COLOW_5	CO	SPAN	8.97	9.20	0.23	2.3	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/19/2019	19:16	COLOW_5	CO	ZERO	0.00	0.04	0.04	0.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.2	100.0 %	CC165921	9/17/2026
07/19/2019	19:16	COLOW_5	CO	SPAN	8.97	9.19	0.22	2.2	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/16/2019	15:46	COLOW_5	CO	ZERO	0.00	0.05	0.05	0.5	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.5	100.0 %	CC165921	9/17/2026
07/16/2019	15:46	COLOW_5	CO	SPAN	8.97	9.17	0.20	2.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/08/2019	06:31	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC165921	9/17/2026
07/08/2019	06:31	COLOW_5	CO	SPAN	8.97	9.15	0.18	1.8	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
06/29/2019	17:46	COLOW_5	CO	ZERO	0.00	-0.01	-0.01	-0.1	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -	48.9	100.0 %	CC165921	9/17/2026
06/29/2019	17:46	COLOW_5	CO	SPAN	8.97	9.11	0.14	1.4	2.00	20.0	PASS	0	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
03/17/2019	18:01	COLOW_5	CO	ZERO	0.00	0.08	0.08	0.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	49.1	100.0 %	SG9159413BAL	7/9/2026
03/17/2019	18:01	COLOW_5	CO	SPAN	9.09	9.08	-0.01	-0.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/16/2019	18:16	COLOW_5	CO	ZERO	0.00	0.07	0.07	0.7	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	SG9159413BAL	7/9/2026
03/16/2019	18:16	COLOW_5	CO	SPAN	9.09	9.09	0.00	0.0	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/11/2019	04:16	COLOW_5	CO	ZERO	0.00	0.03	0.03	0.3	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.7	100.0 %	SG9159413BAL	7/9/2026
03/11/2019	04:16	COLOW_5	CO	SPAN	9.09	9.08	-0.01	-0.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/06/2019	14:56	COLOW_5	CO	ZERO	0.00	0.02	0.02	0.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
03/06/2019	14:56	COLOW_5	CO	SPAN	9.09	9.04	-0.05	-0.5	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/05/2019	07:33	COLOW_5	CO	ZERO	0.00	0.20	0.20	2.0	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.5	100.0 %	SG9159413BAL	7/9/2026
03/05/2019	07:33	COLOW_5	CO	SPAN	9.09	9.28	0.19	1.9	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/04/2019	18:01	COLOW_5	CO	ZERO	0.00	0.21	0.21	2.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	SG9159413BAL	7/9/2026
03/04/2019	18:01	COLOW_5	CO	SPAN	9.09	9.26	0.17	1.7	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/02/2019	06:01	COLOW_5	CO	ZERO	0.00	0.18	0.18	1.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	SG9159413BAL	7/9/2026
03/02/2019	06:01	COLOW_5	CO	SPAN	9.09	9.27	0.18	1.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/26/2019	23:21	COLOW_5	CO	ZERO	0.00	0.17	0.17	1.7	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.4	100.0 %	SG9159413BAL	7/9/2026
02/26/2019	23:21	COLOW_5	CO	SPAN	9.09	9.21	0.12	1.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/25/2019	19:46	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	SG9159413BAL	7/9/2026
02/25/2019	19:46	COLOW_5	CO	SPAN	9.09	9.20	0.11	1.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/19/2019	18:01	COLOW_5	CO	ZERO	0.00	0.09	0.09	0.9	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.9	100.0 %	SG9159413BAL	7/9/2026
02/19/2019	18:01	COLOW_5	CO	SPAN	9.09	9.12	0.03	0.3	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/15/2019	17:46	COLOW_5	CO	ZERO	0.00	0.08	0.08	0.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	SG9159413BAL	7/9/2026
02/15/2019	17:46	COLOW_5	CO	SPAN	9.09	9.10	0.01	0.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/14/2019	13:40	COLOW_5	CO	ZERO	0.00	0.06	0.06	0.6	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
02/14/2019	13:40	COLOW_5	CO	SPAN	9.09	9.13	0.04	0.4	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/06/2019	17:16	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.9	100.0 %	SG9159413BAL	7/9/2026
02/06/2019	17:16	COLOW_5	CO	SPAN	9.09	9.01	-0.08	-0.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/06/2019	15:00	COLOW_5	CO	ZERO	0.00	0.00	0.00	0.0	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	SG9159413BAL	7/9/2026
02/06/2019	15:00	COLOW_5	CO	SPAN	9.09	9.30	0.21	2.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/05/2019	06:46	COLOW_5	CO	ZERO	0.00	0.19	0.19	1.9	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.8	100.0 %	SG9159413BAL	7/9/2026
02/05/2019	06:46	COLOW_5	CO	SPAN	9.09	9.30	0.21	2.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/04/2019	17:46	COLOW_5	CO	ZERO	0.00	0.19	0.19	1.9	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	SG9159413BAL	7/9/2026
02/04/2019	17:46	COLOW_5	CO	SPAN	9.09	9.31	0.22	2.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/03/2019	18:01	COLOW_5	CO	ZERO	0.00	0.21	0.21	2.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	SG9159413BAL	7/9/2026
02/03/2019	18:01	COLOW_5	CO	SPAN	9.09	9.26	0.17	1.7	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/02/2019	21:31	COLOW_5	CO	ZERO	0.00	0.18	0.18	1.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	SG9159413BAL	7/9/2026
02/02/2019	21:31	COLOW_5	CO	SPAN	9.09	9.27	0.18	1.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
02/01/2019	17:16	COLOW_5	CO	ZERO	0.00	0.17	0.17	1.7	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	SG9159413BAL	7/9/2026
02/01/2019	17:16	COLOW_5	CO	SPAN	9.09	9.28	0.19	1.9	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/29/2019	19:31	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	SG9159413BAL	7/9/2026
01/29/2019	19:31	COLOW_5	CO	SPAN	9.09	9.25	0.16	1.6	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/28/2019	07:16	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.7	100.0 %	SG9159413BAL	7/9/2026
01/28/2019	07:16	COLOW_5	CO	SPAN	9.09	9.21	0.12	1.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/26/2019	17:15	COLOW_5	CO	ZERO	0.00	0.15	0.15	1.5	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	SG9159413BAL	7/9/2026
01/26/2019	17:15	COLOW_5	CO	SPAN	9.09	9.21	0.12	1.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/25/2019	18:01	COLOW_5	CO	ZERO	0.00	0.11	0.11	1.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	SG9159413BAL	7/9/2026
01/25/2019	18:01	COLOW_5	CO	SPAN	9.09	9.21	0.12	1.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/24/2019	18:01	COLOW_5	CO	ZERO	0.00	0.12	0.12	1.2	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	SG9159413BAL	7/9/2026
01/24/2019	18:01	COLOW_5	CO	SPAN	9.09	9.20	0.11	1.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/23/2019	06:46	COLOW_5	CO	ZERO	0.00	0.11	0.11	1.1	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -	50.5	100.0 %	SG9159413BAL	7/9/2026
01/23/2019	06:46	COLOW_5	CO	SPAN	9.09	9.17	0.08	0.8	2.00	20.0	PASS	0 - N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
11/12/2019	17:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.6	100.0 %	CC197991	8/19/2027
11/12/2019	17:16	NOx_NH3H_5	NOx	SPAN	181.10	179.34	-1.76	-0.9	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/11/2019	16:16	NOx_NH3H_5	NOx	ZERO	0.00	0.12	0.12	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.6	100.0 %	CC197991	8/19/2027
11/11/2019	16:16	NOx_NH3H_5	NOx	SPAN	181.10	179.64	-1.46	-0.7	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/10/2019	17:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.4	100.0 %	CC197991	8/19/2027
11/10/2019	17:46	NOx_NH3H_5	NOx	SPAN	181.10	179.46	-1.64	-0.8	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/09/2019	17:01	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.2	100.0 %	CC197991	8/19/2027
11/09/2019	17:01	NOx_NH3H_5	NOx	SPAN	181.10	178.99	-2.11	-1.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/08/2019	06:01	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	CC197991	8/19/2027
11/08/2019	06:01	NOx_NH3H_5	NOx	SPAN	181.10	179.68	-1.42	-0.7	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/07/2019	06:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC197991	8/19/2027
11/07/2019	06:16	NOx_NH3H_5	NOx	SPAN	181.10	179.53	-1.57	-0.8	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/06/2019	13:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC197991	8/19/2027
11/06/2019	13:46	NOx_NH3H_5	NOx	SPAN	181.10	178.96	-2.14	-1.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/06/2019	12:32	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC197991	8/19/2027
11/06/2019	12:32	NOx_NH3H_5	NOx	SPAN	181.10	179.03	-2.07	-1.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/05/2019	06:49	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	CC197991	8/19/2027
11/05/2019	06:49	NOx_NH3H_5	NOx	SPAN	181.10	179.19	-1.91	-1.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/04/2019	06:46	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	CC197991	8/19/2027
11/04/2019	06:46	NOx_NH3H_5	NOx	SPAN	181.10	179.00	-2.10	-1.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/03/2019	00:40	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC197991	8/19/2027
11/03/2019	00:40	NOx_NH3H_5	NOx	SPAN	181.10	179.16	-1.94	-1.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/02/2019	06:46	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	CC197991	8/19/2027
11/02/2019	06:46	NOx_NH3H_5	NOx	SPAN	181.10	179.90	-1.20	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
11/01/2019	05:46	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC197991	8/19/2027
11/01/2019	05:46	NOx_NH3H_5	NOx	SPAN	181.10	179.87	-1.23	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/31/2019	05:46	NOx_NH3H_5	NOx	ZERO	0.00	0.15	0.15	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC197991	8/19/2027
10/31/2019	05:46	NOx_NH3H_5	NOx	SPAN	181.10	180.24	-0.86	-0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/30/2019	17:01	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC197991	8/19/2027
10/30/2019	17:01	NOx_NH3H_5	NOx	SPAN	181.10	180.51	-0.59	-0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/30/2019	12:48	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC197991	8/19/2027
10/30/2019	12:48	NOx_NH3H_5	NOx	SPAN	181.10	180.52	-0.58	-0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/29/2019	05:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/29/2019	05:46	NOx_NH3H_5	NOx	SPAN	181.10	179.10	-2.00	-1.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/28/2019	06:01	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/28/2019	06:01	NOx_NH3H_5	NOx	SPAN	181.10	179.63	-1.47	-0.7	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/25/2019	16:46	NOx_NH3H_5	NOx	ZERO	0.00	0.17	0.17	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	CC149073	3/11/2027
10/25/2019	16:46	NOx_NH3H_5	NOx	SPAN	181.10	179.41	-1.69	-0.8	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/24/2019	17:01	NOx_NH3H_5	NOx	ZERO	0.00	0.23	0.23	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.7	100.0 %	CC149073	3/11/2027
10/24/2019	17:01	NOx_NH3H_5	NOx	SPAN	181.10	179.22	-1.88	-0.9	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9167509BAL	2/12/2027
10/24/2019	07:05	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/24/2019	07:05	NOx_NH3H_5	NOx	SPAN	177.60	176.35	-1.25	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
10/23/2019	05:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.5	82.4 %	CC149073	3/11/2027
10/23/2019	05:16	NOx_NH3H_5	NOx	SPAN	177.60	176.31	-1.29	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
10/22/2019	16:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	47.9	100.0 %	CC149073	3/11/2027
10/22/2019	16:46	NOx_NH3H_5	NOx	SPAN	177.60	176.43	-1.17	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
10/21/2019	14:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/21/2019	14:46	NOx_NH3H_5	NOx	SPAN	177.60	176.83	-0.77	-0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
10/20/2019	17:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.8	82.4 %	CC149073	3/11/2027
10/20/2019	17:16	NOx_NH3H_5	NOx	SPAN	177.60	176.52	-1.08	-0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
08/12/2019	14:01	NOx_NH3H_5	NOx	ZERO	0.00	0.09	0.09	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.0	100.0 %	CC149073	3/11/2027
08/12/2019	14:01	NOx_NH3H_5	NOx	SPAN	177.60	178.01	0.41	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
08/08/2019	09:29	NOx_NH3H_5	NOx	ZERO	0.00	0.09	0.09	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
08/08/2019	09:29	NOx_NH3H_5	NOx	SPAN	177.60	177.93	0.33	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
08/05/2019	17:31	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC149073	3/11/2027
08/05/2019	17:31	NOx_NH3H_5	NOx	SPAN	177.60	177.61	0.01	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
08/04/2019	16:46	NOx_NH3H_5	NOx	ZERO	0.00	0.09	0.09	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.3	100.0 %	CC149073	3/11/2027
08/04/2019	16:46	NOx_NH3H_5	NOx	SPAN	177.60	177.87	0.27	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
08/02/2019	13:31	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.6	100.0 %	CC149073	3/11/2027
08/02/2019	13:31	NOx_NH3H_5	NOx	SPAN	177.60	178.09	0.49	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
08/01/2019	12:10	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
08/01/2019	12:10	NOx_NH3H_5	NOx	SPAN	177.60	177.99	0.39	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/28/2019	18:02	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.6	100.0 %	ALM029052	12/13/2026
07/28/2019	18:02	NOx_NH3H_5	NOx	SPAN	177.60	173.17	-4.43	-2.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/24/2019	07:30	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
07/24/2019	07:30	NOx_NH3H_5	NOx	SPAN	177.60	177.27	-0.33	-0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/23/2019	11:01	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.4	100.0 %	ALM029052	12/13/2026
07/23/2019	11:01	NOx_NH3H_5	NOx	SPAN	177.60	177.62	0.02	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/22/2019	10:01	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	5.9 %	ALM029052	12/13/2026
07/22/2019	10:01	NOx_NH3H_5	NOx	SPAN	177.60	177.92	0.32	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/19/2019	19:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.2	100.0 %	ALM029052	12/13/2026
07/19/2019	19:16	NOx_NH3H_5	NOx	SPAN	177.60	177.60	0.00	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/16/2019	15:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.5	100.0 %	ALM029052	12/13/2026
07/16/2019	15:46	NOx_NH3H_5	NOx	SPAN	177.60	177.44	-0.16	-0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
07/08/2019	06:31	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	ALM029052	12/13/2026
07/08/2019	06:31	NOx_NH3H_5	NOx	SPAN	177.60	178.39	0.79	0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
06/29/2019	17:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	ALM029052	12/13/2026
06/29/2019	17:46	NOx_NH3H_5	NOx	SPAN	177.60	178.42	0.82	0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
06/20/2019	10:12	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
06/20/2019	10:12	NOx_NH3H_5	NOx	SPAN	177.60	178.57	0.97	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
06/10/2019	19:31	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	ALM029052	12/13/2026
06/10/2019	19:31	NOx_NH3H_5	NOx	SPAN	177.60	178.63	1.03	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
06/04/2019	06:31	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.4	100.0 %	ALM029052	12/13/2026
06/04/2019	06:31	NOx_NH3H_5	NOx	SPAN	177.60	179.11	1.51	0.8	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/29/2019	07:51	NOx_NH3H_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/29/2019	07:51	NOx_NH3H_5	NOx	SPAN	177.60	178.67	1.07	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/21/2019	07:10	NOx_NH3H_5	NOx	ZERO	0.00	0.08	0.08	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/21/2019	07:10	NOx_NH3H_5	NOx	SPAN	177.60	178.55	0.95	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/20/2019	13:30	NOx_NH3H_5	NOx	ZERO	0.00	0.08	0.08	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/20/2019	13:30	NOx_NH3H_5	NOx	SPAN	177.60	178.62	1.02	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/19/2019	14:44	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/19/2019	14:44	NOx_NH3H_5	NOx	SPAN	177.60	177.96	0.36	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/17/2019	16:15	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/17/2019	16:15	NOx_NH3H_5	NOx	SPAN	177.60	177.99	0.39	0.2	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
05/06/2019	15:00	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/06/2019	15:00	NOx_NH3H_5	NOx	SPAN	177.60	176.36	-1.24	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC165921	9/17/2026
04/30/2019	18:01	NOx_NH3H_5	NOx	ZERO	0.00	0.21	0.21	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.6	100.0 %	ALM029052	12/13/2026
04/30/2019	18:01	NOx_NH3H_5	NOx	SPAN	179.10	177.42	-1.68	-0.8	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
04/25/2019	18:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	ALM029052	12/13/2026
04/25/2019	18:46	NOx_NH3H_5	NOx	SPAN	179.10	177.26	-1.84	-0.9	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
02/14/2019	13:40	NOx_NH3H_5	NOx	ZERO	0.00	0.12	0.12	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM-063377	11/26/2026
02/14/2019	13:40	NOx_NH3H_5	NOx	SPAN	179.10	177.95	-1.15	-0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/06/2019	17:16	NOx_NH3H_5	NOx	ZERO	0.00	0.23	0.23	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.9	100.0 %	ALM-063377	11/26/2026
02/06/2019	17:16	NOx_NH3H_5	NOx	SPAN	179.10	179.06	-0.04	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/06/2019	15:00	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM-063377	11/26/2026
02/06/2019	15:00	NOx_NH3H_5	NOx	SPAN	179.10	178.98	-0.12	-0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/05/2019	06:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.8	100.0 %	CC100080	8/21/2026
02/05/2019	06:46	NOx_NH3H_5	NOx	SPAN	179.10	178.21	-0.89	-0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/04/2019	17:46	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	CC100080	8/21/2026
02/04/2019	17:46	NOx_NH3H_5	NOx	SPAN	179.10	178.11	-0.99	-0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/03/2019	16:01	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	CC100080	8/21/2026
02/03/2019	16:01	NOx_NH3H_5	NOx	SPAN	179.10	178.16	-0.94	-0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/02/2019	21:31	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	CC100080	8/21/2026
02/02/2019	21:31	NOx_NH3H_5	NOx	SPAN	179.10	178.27	-0.83	-0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
02/01/2019	17:16	NOx_NH3H_5	NOx	ZERO	0.00	0.21	0.21	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	CC100080	8/21/2026
02/01/2019	17:16	NOx_NH3H_5	NOx	SPAN	179.10	178.89	-0.21	-0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/29/2019	19:31	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	CC100080	8/21/2026
01/29/2019	19:31	NOx_NH3H_5	NOx	SPAN	179.10	178.58	-0.52	-0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/28/2019	07:16	NOx_NH3H_5	NOx	ZERO	0.00	0.12	0.12	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.7	100.0 %	CC100080	8/21/2026
01/28/2019	07:16	NOx_NH3H_5	NOx	SPAN	179.10	179.19	0.09	0.0	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/26/2019	17:15	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	CC100080	8/21/2026
01/26/2019	17:15	NOx_NH3H_5	NOx	SPAN	179.10	179.79	0.69	0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/25/2019	16:01	NOx_NH3H_5	NOx	ZERO	0.00	0.21	0.21	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	CC100080	8/21/2026
01/25/2019	16:01	NOx_NH3H_5	NOx	SPAN	179.10	179.71	0.61	0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/24/2019	16:01	NOx_NH3H_5	NOx	ZERO	0.00	0.24	0.24	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	CC100080	8/21/2026
01/24/2019	16:01	NOx_NH3H_5	NOx	SPAN	179.10	179.88	0.78	0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/23/2019	06:46	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.5	100.0 %	CC100080	8/21/2026
01/23/2019	06:46	NOx_NH3H_5	NOx	SPAN	179.10	180.45	1.35	0.7	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/22/2019	07:13	NOx_NH3H_5	NOx	ZERO	0.00	0.21	0.21	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	CC100080	8/21/2026
01/22/2019	07:13	NOx_NH3H_5	NOx	SPAN	179.10	180.39	1.29	0.6	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/19/2019	17:16	NOx_NH3H_5	NOx	ZERO	0.00	0.22	0.22	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC100080	8/21/2026
01/19/2019	17:16	NOx_NH3H_5	NOx	SPAN	179.10	180.01	0.91	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/18/2019	07:01	NOx_NH3H_5	NOx	ZERO	0.00	0.21	0.21	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	51.0	100.0 %	CC100080	8/21/2026
01/18/2019	07:01	NOx_NH3H_5	NOx	SPAN	179.10	180.46	1.36	0.7	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/16/2019	17:48	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	CC100080	8/21/2026
01/16/2019	17:48	NOx_NH3H_5	NOx	SPAN	179.10	180.09	0.99	0.5	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/14/2019	11:33	NOx_NH3H_5	NOx	ZERO	0.00	0.19	0.19	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.8	100.0 %	CC100080	8/21/2026
01/14/2019	11:33	NOx_NH3H_5	NOx	SPAN	179.10	179.70	0.60	0.3	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/12/2019	09:42	NOx_NH3H_5	NOx	ZERO	0.00	0.18	0.18	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.4	100.0 %	CC100080	8/21/2026
01/12/2019	09:42	NOx_NH3H_5	NOx	SPAN	179.10	179.26	0.16	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/12/2019	07:11	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC100080	8/21/2026
01/12/2019	07:11	NOx_NH3H_5	NOx	SPAN	179.10	178.91	-0.19	-0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			SG9159413BAL	7/9/2026
01/09/2019	11:16	NOx_NH3H_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC100080	8/21/2026
01/09/2019	11:16	NOx_NH3H_5	NOx	SPAN	179.70	178.90	-0.80	-0.4	20.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC37505	6/6/2026
12/30/2019	15:47	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	EB0078249	11/28/2027
12/30/2019	15:47	NOx_NH3L_5	NOx	SPAN	8.85	8.79	-0.06	-0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
12/26/2019	17:16	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.4	100.0 %	EB0078249	11/28/2027
12/26/2019	17:16	NOx_NH3L_5	NOx	SPAN	8.85	8.86	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022
12/18/2019	17:46	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.3	100.0 %	EB0078249	11/28/2027
12/18/2019	17:46	NOx_NH3L_5	NOx	SPAN	8.85	8.89	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC266925	1/9/2022

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
11/02/2019	06:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	CC197991	8/19/2027
11/02/2019	06:46	NOx_NH3L_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
11/01/2019	05:46	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC197991	8/19/2027
11/01/2019	05:46	NOx_NH3L_5	NOx	SPAN	9.04	9.11	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/31/2019	05:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC197991	8/19/2027
10/31/2019	05:46	NOx_NH3L_5	NOx	SPAN	9.04	9.11	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/30/2019	17:01	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	CC197991	8/19/2027
10/30/2019	17:01	NOx_NH3L_5	NOx	SPAN	9.04	9.12	0.08	0.8	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/30/2019	12:48	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC197991	8/19/2027
10/30/2019	12:48	NOx_NH3L_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/29/2019	05:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/29/2019	05:46	NOx_NH3L_5	NOx	SPAN	9.04	9.04	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/28/2019	06:01	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/28/2019	06:01	NOx_NH3L_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/25/2019	16:46	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	CC149073	3/11/2027
10/25/2019	16:46	NOx_NH3L_5	NOx	SPAN	9.04	9.06	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/24/2019	17:01	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.7	100.0 %	CC149073	3/11/2027
10/24/2019	17:01	NOx_NH3L_5	NOx	SPAN	9.04	9.09	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/24/2019	07:05	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/24/2019	07:05	NOx_NH3L_5	NOx	SPAN	9.04	9.02	-0.02	-0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/23/2019	05:16	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.5	100.0 %	CC149073	3/11/2027
10/23/2019	05:16	NOx_NH3L_5	NOx	SPAN	9.04	9.05	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/22/2019	16:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	47.9	100.0 %	CC149073	3/11/2027
10/22/2019	16:46	NOx_NH3L_5	NOx	SPAN	9.04	9.06	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/21/2019	14:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/21/2019	14:46	NOx_NH3L_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/20/2019	17:16	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.8	100.0 %	CC149073	3/11/2027
10/20/2019	17:16	NOx_NH3L_5	NOx	SPAN	9.04	9.06	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/19/2019	17:01	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.8	100.0 %	CC149073	3/11/2027
10/19/2019	17:01	NOx_NH3L_5	NOx	SPAN	9.04	9.06	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/18/2019	05:46	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	CC149073	3/11/2027
10/18/2019	05:46	NOx_NH3L_5	NOx	SPAN	9.04	9.05	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/17/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/17/2019	18:01	NOx_NH3L_5	NOx	SPAN	9.04	9.03	-0.01	-0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/16/2019	05:16	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/16/2019	05:16	NOx_NH3L_5	NOx	SPAN	9.04	9.07	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/15/2019	17:11	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.3	100.0 %	CC149073	3/11/2027
10/15/2019	17:11	NOx_NH3L_5	NOx	SPAN	9.04	9.13	0.09	0.9	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/08/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/08/2019	18:01	NOx_NH3L_5	NOx	SPAN	9.04	9.05	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/07/2019	17:46	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/07/2019	17:46	NOx_NH3L_5	NOx	SPAN	9.04	9.05	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/06/2019	17:16	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.6	100.0 %	CC149073	3/11/2027
10/06/2019	17:16	NOx_NH3L_5	NOx	SPAN	9.04	9.07	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/05/2019	17:16	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.6	100.0 %	CC149073	3/11/2027
10/05/2019	17:16	NOx_NH3L_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/02/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.8	100.0 %	CC149073	3/11/2027
10/02/2019	18:01	NOx_NH3L_5	NOx	SPAN	9.04	9.11	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021
10/02/2019	09:24	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC149073	3/11/2027
10/02/2019	09:24	NOx_NH3L_5	NOx	SPAN	9.04	9.01	-0.03	-0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC454217	9/28/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Part75 Allowable Error %	Units	%		Gross MW 5 MW	Process On	Bottle ID	Expire Date
07/16/2019	15:46	NOx_NH3L_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.5	100.0 %	ALM029052	12/13/2026
07/16/2019	15:46	NOx_NH3L_5	NOx	SPAN	9.07	9.10	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
07/08/2019	06:31	NOx_NH3L_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.0	100.0 %	ALM029052	12/13/2026
07/08/2019	06:31	NOx_NH3L_5	NOx	SPAN	9.07	9.16	0.09	0.9	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
06/29/2019	17:46	NOx_NH3L_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	ALM029052	12/13/2026
06/29/2019	17:46	NOx_NH3L_5	NOx	SPAN	9.07	9.15	0.08	0.8	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
06/20/2019	10:12	NOx_NH3L_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
06/20/2019	10:12	NOx_NH3L_5	NOx	SPAN	9.07	9.17	0.10	1.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
06/10/2019	15:31	NOx_NH3L_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	48.9	100.0 %	ALM029052	12/13/2026
06/10/2019	19:31	NOx_NH3L_5	NOx	SPAN	9.07	9.18	0.11	1.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
06/04/2019	06:31	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.4	100.0 %	ALM029052	12/13/2026
06/04/2019	06:31	NOx_NH3L_5	NOx	SPAN	9.07	9.18	0.11	1.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/29/2019	07:51	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/29/2019	07:51	NOx_NH3L_5	NOx	SPAN	9.07	9.14	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/21/2019	07:10	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/21/2019	07:10	NOx_NH3L_5	NOx	SPAN	9.07	9.16	0.09	0.9	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/20/2019	13:30	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/20/2019	13:30	NOx_NH3L_5	NOx	SPAN	9.07	9.12	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/19/2019	14:44	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/19/2019	14:44	NOx_NH3L_5	NOx	SPAN	9.07	9.09	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/17/2019	16:15	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/17/2019	16:15	NOx_NH3L_5	NOx	SPAN	9.07	9.11	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
05/06/2019	15:00	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
05/06/2019	15:00	NOx_NH3L_5	NOx	SPAN	9.07	9.08	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/30/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.6	100.0 %	ALM029052	12/13/2026
04/30/2019	18:01	NOx_NH3L_5	NOx	SPAN	9.07	9.17	0.10	1.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/25/2019	18:46	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	ALM029052	12/13/2026
04/25/2019	18:46	NOx_NH3L_5	NOx	SPAN	9.07	9.12	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/24/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	ALM029052	12/13/2026
04/24/2019	18:01	NOx_NH3L_5	NOx	SPAN	9.07	9.14	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/22/2019	19:03	NOx_NH3L_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/22/2019	19:03	NOx_NH3L_5	NOx	SPAN	9.07	9.08	0.01	0.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/21/2019	19:01	NOx_NH3L_5	NOx	ZERO	0.00	0.07	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/21/2019	19:01	NOx_NH3L_5	NOx	SPAN	9.07	9.15	0.08	0.8	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/14/2019	15:01	NOx_NH3L_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/14/2019	19:01	NOx_NH3L_5	NOx	SPAN	9.07	9.13	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/13/2019	18:16	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	ALM029052	12/13/2026
04/13/2019	18:16	NOx_NH3L_5	NOx	SPAN	9.07	9.15	0.08	0.8	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/12/2019	05:33	NOx_NH3L_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/12/2019	05:33	NOx_NH3L_5	NOx	SPAN	9.07	9.10	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/11/2019	12:46	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/11/2019	12:46	NOx_NH3L_5	NOx	SPAN	9.07	9.17	0.10	1.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/08/2019	18:46	NOx_NH3L_5	NOx	ZERO	0.00	0.07	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/08/2019	18:46	NOx_NH3L_5	NOx	SPAN	9.07	9.19	0.12	1.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/04/2019	09:56	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM029052	12/13/2026
04/04/2019	09:56	NOx_NH3L_5	NOx	SPAN	9.07	9.10	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC328061	9/28/2021
04/01/2019	18:48	NOx_NH3L_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	ALM-063377	11/26/2026
04/01/2019	18:48	NOx_NH3L_5	NOx	SPAN	8.76	8.96	0.20	2.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
03/31/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.07	0.07	0.7	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.5	100.0 %	ALM-063377	11/26/2026
03/31/2019	18:01	NOx_NH3L_5	NOx	SPAN	8.76	9.00	0.24	2.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW 5 MW	Process On	Bottle ID	Expire Date
01/26/2019	17:15	NOx_NH3L_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.9	100.0 %	CC100080	8/21/2026
01/26/2019	17:15	NOx_NH3L_5	NOx	SPAN	8.76	8.88	0.12	1.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/25/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.1	100.0 %	CC100080	8/21/2026
01/25/2019	18:01	NOx_NH3L_5	NOx	SPAN	8.76	8.86	0.10	1.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/24/2019	18:01	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.2	100.0 %	CC100080	8/21/2026
01/24/2019	18:01	NOx_NH3L_5	NOx	SPAN	8.76	8.87	0.11	1.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/23/2019	06:46	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	CC100080	8/21/2026
01/23/2019	06:46	NOx_NH3L_5	NOx	SPAN	8.76	8.90	0.14	1.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/22/2019	07:13	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.6	100.0 %	CC100080	8/21/2026
01/22/2019	07:13	NOx_NH3L_5	NOx	SPAN	8.76	8.88	0.12	1.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/19/2019	17:16	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	49.8	100.0 %	CC100080	8/21/2026
01/19/2019	17:16	NOx_NH3L_5	NOx	SPAN	8.76	8.87	0.11	1.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/18/2019	07:01	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	51.0	100.0 %	CC100080	8/21/2026
01/18/2019	07:01	NOx_NH3L_5	NOx	SPAN	8.76	8.90	0.14	1.4	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/16/2019	17:48	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.0	100.0 %	CC100080	8/21/2026
01/16/2019	17:48	NOx_NH3L_5	NOx	SPAN	8.76	8.88	0.12	1.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/14/2019	11:33	NOx_NH3L_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.8	100.0 %	CC100080	8/21/2026
01/14/2019	11:33	NOx_NH3L_5	NOx	SPAN	8.76	8.87	0.11	1.1	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/12/2019	09:42	NOx_NH3L_5	NOx	ZERO	0.00	0.10	0.10	1.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	50.4	100.0 %	CC100080	8/21/2026
01/12/2019	09:42	NOx_NH3L_5	NOx	SPAN	8.76	8.92	0.16	1.6	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/12/2019	07:11	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC100080	8/21/2026
01/12/2019	07:11	NOx_NH3L_5	NOx	SPAN	8.76	8.78	0.02	0.2	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
01/09/2019	11:16	NOx_NH3L_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -	0.0	0.0 %	CC100080	8/21/2026
01/09/2019	11:16	NOx_NH3L_5	NOx	SPAN	8.76	8.79	0.03	0.3	1.00	10.0	PASS	0	- N/A -	- N/A -	- N/A -	- N/A -			CC280120	4/11/2021
12/30/2019	15:47	NOxHIGH_5	NOx	ZERO	0.00	0.10	0.10	0.1	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	EB0078249	11/28/2027
12/30/2019	15:47	NOxHIGH_5	NOx	SPAN	181.10	181.93	0.83	0.4	20.00	10.0	PASS	0	0.4	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/26/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.4	100.0 %	EB0078249	11/28/2027
12/26/2019	17:16	NOxHIGH_5	NOx	SPAN	181.10	181.42	0.32	0.2	20.00	10.0	PASS	0	0.2	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/18/2019	17:46	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.3	100.0 %	EB0078249	11/28/2027
12/18/2019	17:46	NOxHIGH_5	NOx	SPAN	181.10	181.57	0.47	0.2	20.00	10.0	PASS	0	0.3	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/17/2019	17:01	NOxHIGH_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	50.4	100.0 %	CC197991	8/19/2027
12/17/2019	17:01	NOxHIGH_5	NOx	SPAN	181.10	182.55	1.45	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/11/2019	15:06	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
12/11/2019	15:06	NOxHIGH_5	NOx	SPAN	181.10	181.53	0.43	0.2	20.00	10.0	PASS	0	0.2	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/04/2019	13:40	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
12/04/2019	13:40	NOxHIGH_5	NOx	SPAN	181.10	180.81	-0.29	-0.1	20.00	10.0	PASS	0	-0.2	10.00	5.0	PASS			SG9167509BAL	2/12/2027
12/03/2019	09:31	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.8	100.0 %	CC197991	8/19/2027
12/03/2019	09:31	NOxHIGH_5	NOx	SPAN	181.10	181.19	0.09	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/26/2019	07:01	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.8	100.0 %	CC197991	8/19/2027
11/26/2019	07:01	NOxHIGH_5	NOx	SPAN	181.10	180.60	-0.50	-0.3	20.00	10.0	PASS	0	-0.3	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/24/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.1	100.0 %	CC197991	8/19/2027
11/24/2019	17:16	NOxHIGH_5	NOx	SPAN	181.10	180.76	-0.34	-0.2	20.00	10.0	PASS	0	-0.2	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/22/2019	14:50	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.3	100.0 %	CC197991	8/19/2027
11/22/2019	14:50	NOxHIGH_5	NOx	SPAN	181.10	180.77	-0.33	-0.2	20.00	10.0	PASS	0	-0.2	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/21/2019	12:44	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
11/21/2019	12:44	NOxHIGH_5	NOx	SPAN	181.10	181.29	0.19	0.1	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/18/2019	17:01	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.7	100.0 %	CC197991	8/19/2027
11/18/2019	17:01	NOxHIGH_5	NOx	SPAN	181.10	180.93	-0.17	-0.1	20.00	10.0	PASS	0	-0.1	10.00	5.0	PASS			SG9167509BAL	2/12/2027
11/17/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.3	100.0 %	CC197991	8/19/2027
11/17/2019	17:16	NOxHIGH_5	NOx	SPAN	181.10	181.19	0.09	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS			SG9167509BAL	2/12/2027

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross_MW_5 MW	Process On	Bottle ID	Expire Date
10/23/2019	05:16	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.5	82.4 %	CC149073	3/11/2027
10/23/2019	05:16	NOxHIGH_5	NOx	SPAN	177.60	179.65	2.05	1.0	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
10/22/2019	16:46	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	47.9	100.0 %	CC149073	3/11/2027
10/22/2019	16:46	NOxHIGH_5	NOx	SPAN	177.60	179.64	2.04	1.0	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
10/21/2019	14:46	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/21/2019	14:46	NOxHIGH_5	NOx	SPAN	177.60	179.62	2.02	1.0	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
10/20/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.8	82.4 %	CC149073	3/11/2027
10/20/2019	17:16	NOxHIGH_5	NOx	SPAN	177.60	179.49	1.89	0.9	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
10/19/2019	17:01	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.8	100.0 %	CC149073	3/11/2027
10/19/2019	17:01	NOxHIGH_5	NOx	SPAN	177.60	179.44	1.84	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			CC165921	9/17/2026
10/18/2019	05:46	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.1	100.0 %	CC149073	3/11/2027
10/18/2019	05:46	NOxHIGH_5	NOx	SPAN	177.60	179.76	2.16	1.1	20.00	10.0	PASS	0	1.1	10.00	5.0	PASS			CC165921	9/17/2026
10/17/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/17/2019	18:01	NOxHIGH_5	NOx	SPAN	177.60	179.41	1.81	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			CC165921	9/17/2026
10/16/2019	05:16	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/16/2019	05:16	NOxHIGH_5	NOx	SPAN	177.60	179.85	2.25	1.1	20.00	10.0	PASS	0	1.2	10.00	5.0	PASS			CC165921	9/17/2026
10/15/2019	17:11	NOxHIGH_5	NOx	ZERO	0.00	0.02	0.02	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.3	100.0 %	CC149073	3/11/2027
10/15/2019	17:11	NOxHIGH_5	NOx	SPAN	177.60	179.81	2.21	1.1	20.00	10.0	PASS	0	1.1	10.00	5.0	PASS			CC165921	9/17/2026
10/08/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/08/2019	18:01	NOxHIGH_5	NOx	SPAN	177.60	179.07	1.47	0.7	20.00	10.0	PASS	0	0.8	10.00	5.0	PASS			CC165921	9/17/2026
10/07/2019	17:46	NOxHIGH_5	NOx	ZERO	0.00	0.05	0.05	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/07/2019	17:46	NOxHIGH_5	NOx	SPAN	177.60	179.18	1.58	0.8	20.00	10.0	PASS	0	0.8	10.00	5.0	PASS			CC165921	9/17/2026
10/06/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.05	0.05	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	48.6	100.0 %	CC149073	3/11/2027
10/06/2019	17:16	NOxHIGH_5	NOx	SPAN	177.60	179.44	1.84	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			CC165921	9/17/2026
10/05/2019	17:16	NOxHIGH_5	NOx	ZERO	0.00	0.05	0.05	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	48.6	82.4 %	CC149073	3/11/2027
10/05/2019	17:16	NOxHIGH_5	NOx	SPAN	177.60	179.56	1.96	1.0	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
10/02/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.08	0.08	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	48.8	100.0 %	CC149073	3/11/2027
10/02/2019	18:01	NOxHIGH_5	NOx	SPAN	177.60	179.45	1.85	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			CC165921	9/17/2026
10/02/2019	09:24	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/02/2019	09:24	NOxHIGH_5	NOx	SPAN	177.60	179.49	1.89	0.9	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			CC165921	9/17/2026
09/21/2019	16:01	NOxHIGH_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/21/2019	16:01	NOxHIGH_5	NOx	SPAN	177.60	179.04	1.44	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			CC165921	9/17/2026
09/18/2019	13:58	NOxHIGH_5	NOx	ZERO	0.00	0.05	0.05	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/18/2019	13:58	NOxHIGH_5	NOx	SPAN	177.60	178.80	1.20	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			CC165921	9/17/2026
09/05/2019	14:16	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	47.9	100.0 %	CC149073	3/11/2027
09/05/2019	14:16	NOxHIGH_5	NOx	SPAN	177.60	178.89	1.29	0.6	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			CC165921	9/17/2026
09/04/2019	17:01	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.1	100.0 %	CC149073	3/11/2027
09/04/2019	17:01	NOxHIGH_5	NOx	SPAN	177.60	178.37	0.77	0.4	20.00	10.0	PASS	0	0.4	10.00	5.0	PASS			CC165921	9/17/2026
09/04/2019	09:26	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/04/2019	09:26	NOxHIGH_5	NOx	SPAN	177.60	178.36	0.76	0.4	20.00	10.0	PASS	0	0.4	10.00	5.0	PASS			CC165921	9/17/2026
09/03/2019	16:46	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.0	100.0 %	CC149073	3/11/2027
09/03/2019	16:46	NOxHIGH_5	NOx	SPAN	177.60	178.36	0.76	0.4	20.00	10.0	PASS	0	0.4	10.00	5.0	PASS			CC165921	9/17/2026
09/02/2019	17:46	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.1	100.0 %	CC149073	3/11/2027
09/02/2019	17:46	NOxHIGH_5	NOx	SPAN	177.60	178.61	1.01	0.5	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			CC165921	9/17/2026
09/01/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/01/2019	18:01	NOxHIGH_5	NOx	SPAN	177.60	178.17	0.57	0.3	20.00	10.0	PASS	0	0.3	10.00	5.0	PASS			CC165921	9/17/2026
08/30/2019	14:01	NOxHIGH_5	NOx	ZERO	0.00	0.02	0.02	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	48.0	100.0 %	CC149073	3/11/2027
08/30/2019	14:01	NOxHIGH_5	NOx	SPAN	177.60	178.49	0.89	0.4	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			CC165921	9/17/2026
08/25/2019	00:40	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
08/25/2019	00:40	NOxHIGH_5	NOx	SPAN	177.60	178.47	0.87	0.4	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			CC165921	9/17/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Part60 Allowable Error %	Units	%		WD	Part75 Allowable Error %	Units	%		Gross MW_S MW	Process On	Bottle ID	Expire Date
05/17/2019	16:15	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
05/17/2019	16:15	NOxHIGH_5	NOx	SPAN	177.60	177.90	0.30	0.2	20.00	10.0	PASS	0	0.2	10.00	5.0	PASS			CC165921	9/17/2026
05/06/2019	15:00	NOxHIGH_5	NOx	ZERO	0.00	0.05	0.05	0.0	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
05/06/2019	15:00	NOxHIGH_5	NOx	SPAN	177.60	179.93	2.33	1.2	20.00	10.0	PASS	0	1.2	10.00	5.0	PASS			CC165921	9/17/2026
04/30/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.6	100.0 %	ALM029052	12/13/2026
04/30/2019	18:01	NOxHIGH_5	NOx	SPAN	179.10	180.74	1.64	0.8	20.00	10.0	PASS	0	0.8	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/25/2019	18:46	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.0	100.0 %	ALM029052	12/13/2026
04/25/2019	18:46	NOxHIGH_5	NOx	SPAN	179.10	180.85	1.75	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/24/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.1	100.0 %	ALM029052	12/13/2026
04/24/2019	18:01	NOxHIGH_5	NOx	SPAN	179.10	180.85	1.75	0.9	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/22/2019	19:03	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/22/2019	19:03	NOxHIGH_5	NOx	SPAN	179.10	180.78	1.68	0.8	20.00	10.0	PASS	0	0.9	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/21/2019	19:01	NOxHIGH_5	NOx	ZERO	0.00	0.02	0.02	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/21/2019	19:01	NOxHIGH_5	NOx	SPAN	179.10	180.52	1.42	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/14/2019	19:01	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/14/2019	19:01	NOxHIGH_5	NOx	SPAN	179.10	180.42	1.32	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/13/2019	18:16	NOxHIGH_5	NOx	ZERO	0.00	0.02	0.02	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.8	100.0 %	ALM029052	12/13/2026
04/13/2019	18:16	NOxHIGH_5	NOx	SPAN	179.10	180.55	1.45	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/12/2019	05:33	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/12/2019	05:33	NOxHIGH_5	NOx	SPAN	179.10	180.25	1.15	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/11/2019	12:46	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/11/2019	12:46	NOxHIGH_5	NOx	SPAN	179.10	180.67	1.57	0.8	20.00	10.0	PASS	0	0.8	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/08/2019	18:46	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/08/2019	18:46	NOxHIGH_5	NOx	SPAN	179.10	181.12	2.02	1.0	20.00	10.0	PASS	0	1.0	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/04/2019	09:56	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/04/2019	09:56	NOxHIGH_5	NOx	SPAN	179.10	180.59	1.49	0.7	20.00	10.0	PASS	0	0.8	10.00	5.0	PASS			SG9159413BAL	7/9/2026
04/01/2019	18:48	NOxHIGH_5	NOx	ZERO	0.00	0.02	0.02	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
04/01/2019	18:48	NOxHIGH_5	NOx	SPAN	179.10	179.82	0.72	0.4	20.00	10.0	PASS	0	0.4	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/31/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.5	100.0 %	ALM-063377	11/26/2026
03/31/2019	18:01	NOxHIGH_5	NOx	SPAN	179.10	180.01	0.91	0.5	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/27/2019	04:31	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.8	100.0 %	ALM-063377	11/26/2026
03/27/2019	04:31	NOxHIGH_5	NOx	SPAN	179.10	179.97	0.87	0.4	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/26/2019	12:33	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
03/26/2019	12:33	NOxHIGH_5	NOx	SPAN	179.10	180.02	0.92	0.5	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/18/2019	18:46	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.5	100.0 %	ALM-063377	11/26/2026
03/18/2019	18:46	NOxHIGH_5	NOx	SPAN	179.10	180.23	1.13	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/17/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	49.1	100.0 %	ALM-063377	11/26/2026
03/17/2019	18:01	NOxHIGH_5	NOx	SPAN	179.10	180.30	1.20	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/16/2019	18:16	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.1	100.0 %	ALM-063377	11/26/2026
03/16/2019	18:16	NOxHIGH_5	NOx	SPAN	179.10	180.45	1.35	0.7	20.00	10.0	PASS	0	0.7	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/11/2019	04:16	NOxHIGH_5	NOx	ZERO	0.00	0.03	0.03	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.7	100.0 %	ALM-063377	11/26/2026
03/11/2019	04:16	NOxHIGH_5	NOx	SPAN	179.10	179.65	0.55	0.3	20.00	10.0	PASS	0	0.3	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/06/2019	14:56	NOxHIGH_5	NOx	ZERO	0.00	0.04	0.04	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
03/06/2019	14:56	NOxHIGH_5	NOx	SPAN	179.10	180.29	1.19	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/05/2019	07:33	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.5	100.0 %	ALM-063377	11/26/2026
03/05/2019	07:33	NOxHIGH_5	NOx	SPAN	179.10	180.17	1.07	0.5	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/04/2019	18:01	NOxHIGH_5	NOx	ZERO	0.00	0.01	0.01	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.2	100.0 %	ALM-063377	11/26/2026
03/04/2019	18:01	NOxHIGH_5	NOx	SPAN	179.10	180.32	1.22	0.6	20.00	10.0	PASS	0	0.6	10.00	5.0	PASS			SG9159413BAL	7/9/2026
03/02/2019	06:01	NOxHIGH_5	NOx	ZERO	0.00	0.00	0.00	0.0	20.00	10.0	PASS	0	0.0	10.00	5.0	PASS	50.3	100.0 %	ALM-063377	11/26/2026
03/02/2019	06:01	NOxHIGH_5	NOx	SPAN	179.10	179.98	0.88	0.4	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			SG9159413BAL	7/9/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
01/09/2019	11:16	NOxHIGH_5	NOx	ZERO	0.00	0.11	0.11	0.1	20.00	10.0	PASS	0	0.1	10.00	5.0	PASS	0.0	0.0 %	CC100080	8/21/2026
01/09/2019	11:16	NOxHIGH_5	NOx	SPAN	179.70	180.70	1.00	0.5	20.00	10.0	PASS	0	0.5	10.00	5.0	PASS			CC37505	6/6/2026
12/30/2019	15:47	NOxLOW_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS	0.0	0.0 %	EB0078249	11/28/2027
12/30/2019	15:47	NOxLOW_5	NOx	SPAN	8.85	8.90	0.05	0.5	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
12/26/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.4	100.0 %	EB0078249	11/28/2027
12/26/2019	17:16	NOxLOW_5	NOx	SPAN	8.85	8.75	-0.10	-1.0	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
12/18/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.3	100.0 %	EB0078249	11/28/2027
12/18/2019	17:46	NOxLOW_5	NOx	SPAN	8.85	8.76	-0.09	-0.9	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
12/17/2019	17:01	NOxLOW_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.4	100.0 %	CC197991	8/19/2027
12/17/2019	17:01	NOxLOW_5	NOx	SPAN	8.85	8.83	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
12/11/2019	15:06	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
12/11/2019	15:06	NOxLOW_5	NOx	SPAN	8.85	8.88	0.03	0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
12/04/2019	13:40	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
12/04/2019	13:40	NOxLOW_5	NOx	SPAN	8.85	8.97	0.12	1.2	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC266925	1/9/2022
12/03/2019	09:31	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.8	100.0 %	CC197991	8/19/2027
12/03/2019	09:31	NOxLOW_5	NOx	SPAN	8.85	8.86	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
11/26/2019	07:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.8	100.0 %	CC197991	8/19/2027
11/26/2019	07:01	NOxLOW_5	NOx	SPAN	8.85	8.86	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
11/24/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.1	100.0 %	CC197991	8/19/2027
11/24/2019	17:16	NOxLOW_5	NOx	SPAN	8.85	8.77	-0.08	-0.8	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
11/22/2019	14:50	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.4	100.0 %	CC197991	8/19/2027
11/22/2019	14:50	NOxLOW_5	NOx	SPAN	8.85	8.85	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
11/21/2019	12:44	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
11/21/2019	12:44	NOxLOW_5	NOx	SPAN	8.85	8.87	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC266925	1/9/2022
11/18/2019	17:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.7	100.0 %	CC197991	8/19/2027
11/18/2019	17:01	NOxLOW_5	NOx	SPAN	8.85	8.67	-0.18	-1.8	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC266925	1/9/2022
11/17/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.3	100.0 %	CC197991	8/19/2027
11/17/2019	17:16	NOxLOW_5	NOx	SPAN	8.85	8.72	-0.13	-1.3	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
11/16/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.0	100.0 %	CC197991	8/19/2027
11/16/2019	17:16	NOxLOW_5	NOx	SPAN	8.85	8.76	-0.09	-0.9	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
11/15/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.6	100.0 %	CC197991	8/19/2027
11/15/2019	17:16	NOxLOW_5	NOx	SPAN	8.85	8.76	-0.09	-0.9	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC266925	1/9/2022
11/14/2019	06:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.9	100.0 %	CC197991	8/19/2027
11/14/2019	06:16	NOxLOW_5	NOx	SPAN	9.04	9.10	0.06	0.6	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC454217	9/28/2021
11/13/2019	16:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.4	100.0 %	CC197991	8/19/2027
11/13/2019	16:16	NOxLOW_5	NOx	SPAN	9.04	9.05	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/12/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.6	100.0 %	CC197991	8/19/2027
11/12/2019	17:16	NOxLOW_5	NOx	SPAN	9.04	9.06	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/11/2019	16:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.6	100.0 %	CC197991	8/19/2027
11/11/2019	16:16	NOxLOW_5	NOx	SPAN	9.04	9.00	-0.04	-0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/10/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.4	100.0 %	CC197991	8/19/2027
11/10/2019	17:46	NOxLOW_5	NOx	SPAN	9.04	9.03	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/09/2019	17:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.2	100.0 %	CC197991	8/19/2027
11/09/2019	17:01	NOxLOW_5	NOx	SPAN	9.04	9.01	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/08/2019	06:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.0	100.0 %	CC197991	8/19/2027
11/08/2019	06:01	NOxLOW_5	NOx	SPAN	9.04	9.09	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC454217	9/28/2021
11/07/2019	06:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.8	100.0 %	CC197991	8/19/2027
11/07/2019	06:16	NOxLOW_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
11/06/2019	13:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC197991	8/19/2027
11/06/2019	13:46	NOxLOW_5	NOx	SPAN	9.04	9.08	0.04	0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross_MW_5 MW	Process On	Bottle ID	Expire Date
10/06/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.6	100.0 %	CC149073	3/11/2027
10/06/2019	17:16	NOxLOW_5	NOx	SPAN	9.04	8.86	-0.18	-1.8	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC454217	9/28/2021
10/05/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.6	100.0 %	CC149073	3/11/2027
10/05/2019	17:16	NOxLOW_5	NOx	SPAN	9.04	8.95	-0.09	-0.9	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC454217	9/28/2021
10/02/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	0.06	0.06	0.6	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS	48.8	100.0 %	CC149073	3/11/2027
10/02/2019	18:01	NOxLOW_5	NOx	SPAN	9.04	9.01	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
10/02/2019	09:24	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
10/02/2019	09:24	NOxLOW_5	NOx	SPAN	9.04	9.09	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC454217	9/28/2021
09/21/2019	16:01	NOxLOW_5	NOx	ZERO	0.00	0.05	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/21/2019	16:01	NOxLOW_5	NOx	SPAN	9.04	8.97	-0.07	-0.7	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC454217	9/28/2021
09/18/2019	13:58	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/18/2019	13:58	NOxLOW_5	NOx	SPAN	9.04	9.02	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC454217	9/28/2021
09/05/2019	14:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	47.9	100.0 %	CC149073	3/11/2027
09/05/2019	14:16	NOxLOW_5	NOx	SPAN	9.04	9.09	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC454217	9/28/2021
09/04/2019	17:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.1	100.0 %	CC149073	3/11/2027
09/04/2019	17:01	NOxLOW_5	NOx	SPAN	9.07	9.03	-0.04	-0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
09/04/2019	09:26	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/04/2019	09:26	NOxLOW_5	NOx	SPAN	9.07	9.21	0.14	1.4	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
09/03/2019	16:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.0	100.0 %	CC149073	3/11/2027
09/03/2019	16:46	NOxLOW_5	NOx	SPAN	9.07	9.02	-0.05	-0.5	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
09/02/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.1	100.0 %	CC149073	3/11/2027
09/02/2019	17:46	NOxLOW_5	NOx	SPAN	9.07	9.05	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
09/01/2019	16:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
09/01/2019	16:01	NOxLOW_5	NOx	SPAN	9.07	9.09	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
08/30/2019	14:01	NOxLOW_5	NOx	ZERO	0.00	0.03	0.03	0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.0	100.0 %	CC149073	3/11/2027
08/30/2019	14:01	NOxLOW_5	NOx	SPAN	9.07	9.13	0.06	0.6	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/25/2019	00:40	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
08/25/2019	00:40	NOxLOW_5	NOx	SPAN	9.07	9.12	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/24/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.4	100.0 %	CC149073	3/11/2027
08/24/2019	17:46	NOxLOW_5	NOx	SPAN	9.07	9.14	0.07	0.7	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/19/2019	15:46	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.3	100.0 %	CC149073	3/11/2027
08/19/2019	15:46	NOxLOW_5	NOx	SPAN	9.07	9.09	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
08/15/2019	16:17	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.3	100.0 %	CC149073	3/11/2027
08/15/2019	16:17	NOxLOW_5	NOx	SPAN	9.07	9.05	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
08/14/2019	16:28	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
08/14/2019	16:28	NOxLOW_5	NOx	SPAN	9.07	9.05	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
08/12/2019	14:01	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.0	100.0 %	CC149073	3/11/2027
08/12/2019	14:01	NOxLOW_5	NOx	SPAN	9.07	9.13	0.06	0.6	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/08/2019	09:29	NOxLOW_5	NOx	ZERO	0.00	0.04	0.04	0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
08/08/2019	09:29	NOxLOW_5	NOx	SPAN	9.07	9.21	0.14	1.4	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/05/2019	17:31	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.0	100.0 %	CC149073	3/11/2027
08/05/2019	17:31	NOxLOW_5	NOx	SPAN	9.07	9.00	-0.07	-0.7	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/04/2019	18:46	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.3	100.0 %	CC149073	3/11/2027
08/04/2019	18:46	NOxLOW_5	NOx	SPAN	9.07	9.03	-0.04	-0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
08/02/2019	13:31	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	48.6	100.0 %	CC149073	3/11/2027
08/02/2019	13:31	NOxLOW_5	NOx	SPAN	9.07	9.14	0.07	0.7	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
08/01/2019	12:10	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	CC149073	3/11/2027
08/01/2019	12:10	NOxLOW_5	NOx	SPAN	9.07	9.12	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
07/28/2019	18:02	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.6	100.0 %	ALM029052	12/13/2026
07/28/2019	18:02	NOxLOW_5	NOx	SPAN	9.07	9.04	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
04/08/2019	18:46	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/08/2019	18:46	NOxLOW_5	NOx	SPAN	9.07	9.18	0.11	1.1	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC328061	9/28/2021
04/04/2019	09:56	NOxLOW_5	NOx	ZERO	0.00	-0.02	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM029052	12/13/2026
04/04/2019	09:56	NOxLOW_5	NOx	SPAN	9.07	9.10	0.03	0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC328061	9/28/2021
04/01/2019	18:48	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
04/01/2019	18:48	NOxLOW_5	NOx	SPAN	8.76	8.83	0.07	0.7	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/31/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.5	100.0 %	ALM-063377	11/26/2026
03/31/2019	18:01	NOxLOW_5	NOx	SPAN	8.76	8.85	0.09	0.9	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/27/2019	04:31	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.8	100.0 %	ALM-063377	11/26/2026
03/27/2019	04:31	NOxLOW_5	NOx	SPAN	8.76	8.91	0.15	1.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/26/2019	12:33	NOxLOW_5	NOx	ZERO	0.00	-0.03	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
03/26/2019	12:33	NOxLOW_5	NOx	SPAN	8.76	8.83	0.07	0.7	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/25/2019	18:46	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
03/25/2019	16:46	NOxLOW_5	NOx	SPAN	8.76	8.62	-0.14	-1.4	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/18/2019	18:46	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.5	100.0 %	ALM-063377	11/26/2026
03/18/2019	18:46	NOxLOW_5	NOx	SPAN	8.76	8.62	-0.14	-1.4	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/17/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.1	100.0 %	ALM-063377	11/26/2026
03/17/2019	18:01	NOxLOW_5	NOx	SPAN	8.76	8.60	-0.16	-1.6	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC280120	4/11/2021
03/16/2019	18:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.1	100.0 %	ALM-063377	11/26/2026
03/16/2019	18:16	NOxLOW_5	NOx	SPAN	8.76	8.61	-0.15	-1.5	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC280120	4/11/2021
03/11/2019	04:16	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.7	100.0 %	ALM-063377	11/26/2026
03/11/2019	04:16	NOxLOW_5	NOx	SPAN	8.76	8.54	-0.22	-2.2	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC280120	4/11/2021
03/06/2019	14:56	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
03/06/2019	14:56	NOxLOW_5	NOx	SPAN	8.76	8.74	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
03/05/2019	07:33	NOxLOW_5	NOx	ZERO	0.00	-0.02	-0.02	-0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.5	100.0 %	ALM-063377	11/26/2026
03/05/2019	07:33	NOxLOW_5	NOx	SPAN	8.76	8.89	0.13	1.3	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/04/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.2	100.0 %	ALM-063377	11/26/2026
03/04/2019	18:01	NOxLOW_5	NOx	SPAN	8.76	8.81	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
03/02/2019	06:01	NOxLOW_5	NOx	ZERO	0.00	0.00	0.00	0.0	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.3	100.0 %	ALM-063377	11/26/2026
03/02/2019	06:01	NOxLOW_5	NOx	SPAN	8.76	8.80	0.04	0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/26/2019	23:21	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.3	100.0 %	ALM-063377	11/26/2026
02/26/2019	23:21	NOxLOW_5	NOx	SPAN	8.76	8.80	0.04	0.4	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/25/2019	19:46	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.6	100.0 %	ALM-063377	11/26/2026
02/25/2019	19:46	NOxLOW_5	NOx	SPAN	8.76	8.78	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/19/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	0.02	0.02	0.2	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.8	100.0 %	ALM-063377	11/26/2026
02/19/2019	18:01	NOxLOW_5	NOx	SPAN	8.76	8.77	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/15/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	0.01	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.6	100.0 %	ALM-063377	11/26/2026
02/15/2019	17:46	NOxLOW_5	NOx	SPAN	8.76	8.81	0.05	0.5	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
02/14/2019	13:40	NOxLOW_5	NOx	ZERO	0.00	-0.03	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
02/14/2019	13:40	NOxLOW_5	NOx	SPAN	8.76	8.73	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/06/2019	17:16	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.9	100.0 %	ALM-063377	11/26/2026
02/06/2019	17:16	NOxLOW_5	NOx	SPAN	8.76	8.84	0.08	0.8	1.00	10.0	PASS	0	1.0	5.00	5.0	PASS			CC280120	4/11/2021
02/06/2019	15:00	NOxLOW_5	NOx	ZERO	0.00	-0.03	-0.03	-0.3	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	0.0	0.0 %	ALM-063377	11/26/2026
02/06/2019	15:00	NOxLOW_5	NOx	SPAN	8.76	8.77	0.01	0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS			CC280120	4/11/2021
02/05/2019	06:46	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.8	100.0 %	CC100080	8/21/2026
02/05/2019	06:46	NOxLOW_5	NOx	SPAN	8.76	8.62	-0.14	-1.4	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC280120	4/11/2021
02/04/2019	17:46	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	49.9	100.0 %	CC100080	8/21/2026
02/04/2019	17:46	NOxLOW_5	NOx	SPAN	8.76	8.54	-0.22	-2.2	1.00	10.0	PASS	0	-2.0	5.00	5.0	PASS			CC280120	4/11/2021
02/03/2019	18:01	NOxLOW_5	NOx	ZERO	0.00	-0.01	-0.01	-0.1	1.00	10.0	PASS	0	0.0	5.00	5.0	PASS	50.2	100.0 %	CC100080	8/21/2026
02/03/2019	18:01	NOxLOW_5	NOx	SPAN	8.76	8.65	-0.11	-1.1	1.00	10.0	PASS	0	-1.0	5.00	5.0	PASS			CC280120	4/11/2021

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW_5 MW	Process On	Bottle ID	Expire Date
11/22/2019	14:50	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.3	100.0 %	SG9167509BAL	2/12/2027
11/22/2019	14:50	O2_5	O2	SPAN	22.51	22.32	-0.19	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/21/2019	12:44	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9167509BAL	2/12/2027
11/21/2019	12:44	O2_5	O2	SPAN	22.51	22.19	-0.32	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/18/2019	17:01	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.7	100.0 %	SG9167509BAL	2/12/2027
11/18/2019	17:01	O2_5	O2	SPAN	22.51	22.12	-0.39	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/17/2019	17:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.3	100.0 %	SG9167509BAL	2/12/2027
11/17/2019	17:16	O2_5	O2	SPAN	22.51	22.20	-0.31	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/16/2019	17:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.0	100.0 %	SG9167509BAL	2/12/2027
11/16/2019	17:16	O2_5	O2	SPAN	22.51	22.21	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/15/2019	17:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.6	100.0 %	SG9167509BAL	2/12/2027
11/15/2019	17:16	O2_5	O2	SPAN	22.51	22.25	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/14/2019	06:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.8	100.0 %	SG9167509BAL	2/12/2027
11/14/2019	06:16	O2_5	O2	SPAN	22.51	22.31	-0.20	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/13/2019	16:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.4	100.0 %	SG9167509BAL	2/12/2027
11/13/2019	16:16	O2_5	O2	SPAN	22.51	22.24	-0.27	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/12/2019	17:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.6	100.0 %	SG9167509BAL	2/12/2027
11/12/2019	17:16	O2_5	O2	SPAN	22.51	22.25	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/11/2019	16:16	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.6	100.0 %	SG9167509BAL	2/12/2027
11/11/2019	16:16	O2_5	O2	SPAN	22.51	22.24	-0.27	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/10/2019	17:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.4	100.0 %	SG9167509BAL	2/12/2027
11/10/2019	17:46	O2_5	O2	SPAN	22.51	22.19	-0.32	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/09/2019	17:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.2	100.0 %	SG9167509BAL	2/12/2027
11/09/2019	17:01	O2_5	O2	SPAN	22.51	22.19	-0.32	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/08/2019	06:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.0	100.0 %	SG9167509BAL	2/12/2027
11/08/2019	06:01	O2_5	O2	SPAN	22.51	22.28	-0.23	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/07/2019	06:16	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.8	100.0 %	SG9167509BAL	2/12/2027
11/07/2019	06:16	O2_5	O2	SPAN	22.51	22.27	-0.24	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/06/2019	13:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9167509BAL	2/12/2027
11/06/2019	13:46	O2_5	O2	SPAN	22.51	22.18	-0.33	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/06/2019	12:32	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.0	100.0 %	SG9167509BAL	2/12/2027
11/06/2019	12:32	O2_5	O2	SPAN	22.51	22.18	-0.33	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/05/2019	06:49	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.1	100.0 %	SG9167509BAL	2/12/2027
11/05/2019	06:49	O2_5	O2	SPAN	22.51	22.21	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/04/2019	06:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.0	100.0 %	SG9167509BAL	2/12/2027
11/04/2019	06:46	O2_5	O2	SPAN	22.51	22.18	-0.33	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/03/2019	00:40	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.8	100.0 %	SG9167509BAL	2/12/2027
11/03/2019	00:40	O2_5	O2	SPAN	22.51	22.19	-0.32	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/02/2019	06:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.9	100.0 %	SG9167509BAL	2/12/2027
11/02/2019	06:46	O2_5	O2	SPAN	22.51	22.25	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
11/01/2019	05:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.8	100.0 %	SG9167509BAL	2/12/2027
11/01/2019	05:46	O2_5	O2	SPAN	22.51	22.27	-0.24	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
10/31/2019	05:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9167509BAL	2/12/2027
10/31/2019	05:46	O2_5	O2	SPAN	22.51	22.34	-0.17	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
10/30/2019	17:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.0	100.0 %	SG9167509BAL	2/12/2027
10/30/2019	17:01	O2_5	O2	SPAN	22.51	22.33	-0.18	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
10/30/2019	12:48	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9167509BAL	2/12/2027
10/30/2019	12:48	O2_5	O2	SPAN	22.51	22.32	-0.19	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC197991	8/19/2027
10/29/2019	05:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9167509BAL	2/12/2027
10/29/2019	05:46	O2_5	O2	SPAN	22.48	22.11	-0.37	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Error %	Part60 Allowable Units	%		WD	Error %	Part75 Allowable Units	%		Gross MW 5 MW	Process On	Bottle ID	Expire Date
09/02/2019	17:46	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.1	100.0 %	CC165921	9/17/2026
09/02/2019	17:46	O2_5	O2	SPAN	22.48	22.17	-0.31	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
09/01/2019	18:01	O2_5	O2	ZERO	0.00	0.11	0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
09/01/2019	18:01	O2_5	O2	SPAN	22.48	22.13	-0.35	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/30/2019	14:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.0	100.0 %	CC165921	9/17/2026
08/30/2019	14:01	O2_5	O2	SPAN	22.48	22.18	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/25/2019	00:40	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
08/25/2019	00:40	O2_5	O2	SPAN	22.48	22.21	-0.27	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/24/2019	17:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.4	100.0 %	CC165921	9/17/2026
08/24/2019	17:46	O2_5	O2	SPAN	22.48	22.18	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/19/2019	15:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.3	100.0 %	CC165921	9/17/2026
08/19/2019	15:46	O2_5	O2	SPAN	22.48	22.18	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/15/2019	18:17	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.3	76.5 %	CC165921	9/17/2026
08/15/2019	18:17	O2_5	O2	SPAN	22.48	22.15	-0.33	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/14/2019	16:28	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
08/14/2019	16:28	O2_5	O2	SPAN	22.48	22.18	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/12/2019	14:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.0	100.0 %	CC165921	9/17/2026
08/12/2019	14:01	O2_5	O2	SPAN	22.48	22.20	-0.28	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/08/2019	09:29	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
08/08/2019	09:29	O2_5	O2	SPAN	22.48	22.21	-0.27	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/05/2019	17:31	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.0	100.0 %	CC165921	9/17/2026
08/05/2019	17:31	O2_5	O2	SPAN	22.48	22.13	-0.35	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/04/2019	18:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.3	100.0 %	CC165921	9/17/2026
08/04/2019	18:46	O2_5	O2	SPAN	22.48	22.17	-0.31	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/02/2019	13:31	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.6	100.0 %	CC165921	9/17/2026
08/02/2019	13:31	O2_5	O2	SPAN	22.48	22.20	-0.28	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
08/01/2019	12:10	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
08/01/2019	12:10	O2_5	O2	SPAN	22.48	22.25	-0.23	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC149073	3/11/2027
07/28/2019	18:02	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.6	100.0 %	CC165921	9/17/2026
07/28/2019	18:02	O2_5	O2	SPAN	22.38	22.08	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/24/2019	07:30	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
07/24/2019	07:30	O2_5	O2	SPAN	22.38	22.13	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/23/2019	11:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.4	100.0 %	CC165921	9/17/2026
07/23/2019	11:01	O2_5	O2	SPAN	22.38	22.14	-0.24	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/22/2019	10:01	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.9	5.9 %	CC165921	9/17/2026
07/22/2019	10:01	O2_5	O2	SPAN	22.38	22.13	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/19/2019	19:16	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.2	100.0 %	CC165921	9/17/2026
07/19/2019	19:16	O2_5	O2	SPAN	22.38	22.07	-0.31	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/16/2019	15:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.5	100.0 %	CC165921	9/17/2026
07/16/2019	15:46	O2_5	O2	SPAN	22.38	22.02	-0.36	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
07/08/2019	06:31	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.0	100.0 %	CC165921	9/17/2026
07/08/2019	06:31	O2_5	O2	SPAN	22.38	22.13	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
06/29/2019	17:46	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.9	100.0 %	CC165921	9/17/2026
06/29/2019	17:46	O2_5	O2	SPAN	22.38	22.13	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
06/20/2019	10:12	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	CC165921	9/17/2026
06/20/2019	10:12	O2_5	O2	SPAN	22.38	22.13	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
06/10/2019	19:31	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	48.9	100.0 %	CC165921	9/17/2026
06/10/2019	19:31	O2_5	O2	SPAN	22.38	22.10	-0.28	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026
06/04/2019	06:31	O2_5	O2	ZERO	0.00	0.10	0.10	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.4	100.0 %	CC165921	9/17/2026
06/04/2019	06:31	O2_5	O2	SPAN	22.38	22.08	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM029052	12/13/2026

Daily Stack Calibration Report
Generated: 2/11/2020

Company: McGrath Generating Station
Plant: 251 N. Harbor Blvd.
City/St: Oxnard, CA 93035
Source: stack

Period Start: 1/1/2019
Period End: 12/30/2019
Included Calibrations: **Daily (40CFR60)/(40CFR75)**

Date	Time	Channel		Type	Target Units	Actual Units	Diff Units	Part60 Allowable Error %	Part60 Allowable Units	Part60 Allowable %		WD	Part75 Allowable Error %	Part75 Allowable Units	Part75 Allowable %		Gross_MW_5 MW	Process On	Bottle ID	Expire Date
03/06/2019	14:56	O2_5	O2	ZERO	0.00	0.15	0.15	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9159413BAL	7/9/2026
03/06/2019	14:56	O2_5	O2	SPAN	22.47	22.21	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
03/05/2019	07:33	O2_5	O2	ZERO	0.00	0.14	0.14	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.5	100.0 %	SG9159413BAL	7/9/2026
03/05/2019	07:33	O2_5	O2	SPAN	22.47	22.25	-0.22	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
03/04/2019	18:01	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.2	100.0 %	SG9159413BAL	7/9/2026
03/04/2019	18:01	O2_5	O2	SPAN	22.47	22.28	-0.19	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
03/02/2019	06:01	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.3	100.0 %	SG9159413BAL	7/9/2026
03/02/2019	06:01	O2_5	O2	SPAN	22.47	22.21	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/26/2019	23:21	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.4	100.0 %	SG9159413BAL	7/9/2026
02/26/2019	23:21	O2_5	O2	SPAN	22.47	22.28	-0.19	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/25/2019	19:46	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.6	100.0 %	SG9159413BAL	7/9/2026
02/25/2019	19:46	O2_5	O2	SPAN	22.47	22.25	-0.22	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/19/2019	18:01	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.9	100.0 %	SG9159413BAL	7/9/2026
02/19/2019	18:01	O2_5	O2	SPAN	22.47	22.29	-0.18	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/15/2019	17:46	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.6	100.0 %	SG9159413BAL	7/9/2026
02/15/2019	17:46	O2_5	O2	SPAN	22.47	22.26	-0.21	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/14/2019	13:40	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9159413BAL	7/9/2026
02/14/2019	13:40	O2_5	O2	SPAN	22.47	22.07	-0.40	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/06/2019	17:16	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.9	100.0 %	SG9159413BAL	7/9/2026
02/06/2019	17:16	O2_5	O2	SPAN	22.47	22.31	-0.16	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/06/2019	15:00	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	0.0	0.0 %	SG9159413BAL	7/9/2026
02/06/2019	15:00	O2_5	O2	SPAN	22.47	22.32	-0.15	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			ALM-063377	11/26/2026
02/05/2019	06:46	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.8	100.0 %	SG9159413BAL	7/9/2026
02/05/2019	06:46	O2_5	O2	SPAN	22.50	22.20	-0.30	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	[illegible]	[illegible]	CC100080	8/21/2026
02/04/2019	17:46	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.9	100.0 %	SG9159413BAL	7/9/2026
02/04/2019	17:46	O2_5	O2	SPAN	22.50	22.13	-0.37	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
02/03/2019	18:01	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.2	100.0 %	SG9159413BAL	7/9/2026
02/03/2019	18:01	O2_5	O2	SPAN	22.50	22.18	-0.32	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
02/02/2019	21:31	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.0	100.0 %	SG9159413BAL	7/9/2026
02/02/2019	21:31	O2_5	O2	SPAN	22.50	22.14	-0.36	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
02/01/2019	17:16	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.3	100.0 %	SG9159413BAL	7/9/2026
02/01/2019	17:16	O2_5	O2	SPAN	22.50	22.24	-0.26	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/29/2019	19:31	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.3	100.0 %	SG9159413BAL	7/9/2026
01/29/2019	19:31	O2_5	O2	SPAN	22.50	22.17	-0.33	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/28/2019	07:16	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.7	100.0 %	SG9159413BAL	7/9/2026
01/28/2019	07:16	O2_5	O2	SPAN	22.50	22.25	-0.25	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/26/2019	17:15	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.9	100.0 %	SG9159413BAL	7/9/2026
01/26/2019	17:15	O2_5	O2	SPAN	22.50	22.39	-0.11	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/25/2019	18:01	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.1	100.0 %	SG9159413BAL	7/9/2026
01/25/2019	18:01	O2_5	O2	SPAN	22.50	22.33	-0.17	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/24/2019	18:01	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.3	100.0 %	SG9159413BAL	7/9/2026
01/24/2019	18:01	O2_5	O2	SPAN	22.50	22.36	-0.14	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/23/2019	06:46	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.5	100.0 %	SG9159413BAL	7/9/2026
01/23/2019	06:46	O2_5	O2	SPAN	22.50	22.53	0.03	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/22/2019	07:13	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	50.6	100.0 %	SG9159413BAL	7/9/2026
01/22/2019	07:13	O2_5	O2	SPAN	22.50	22.47	-0.03	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/19/2019	17:16	O2_5	O2	ZERO	0.00	0.13	0.13	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	49.8	100.0 %	SG9159413BAL	7/9/2026
01/19/2019	17:16	O2_5	O2	SPAN	22.50	22.38	-0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026
01/18/2019	07:01	O2_5	O2	ZERO	0.00	0.12	0.12	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS	51.0	100.0 %	SG9159413BAL	7/9/2026
01/18/2019	07:01	O2_5	O2	SPAN	22.50	22.43	-0.07	- N/A -	2.00	- N/A -	PASS	0	- N/A -	1.00	- N/A -	PASS			CC100080	8/21/2026

Attachment 4

SCR and CO catalyst and temperature devices calibrations Records

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	PDIT-402
Instrument Name	Co Catalyst Pres Drop Transmitter W/ Ind (B-255-PDIT-402)

Zero	0	Span	5	Units	"WG				
Alarm 1 Setpoint				Alarm 2 Setpoint					
Alarm 1 Inc/Dec				Alarm 2 Inc/Dec					

	0%	0	25	1.25	50%	2.5	75%	3.75	100%	5
Span Calibration- Found		~~3.9~~ 4.2		8.2		~~11.37~~ 12.6		16.4		~~16.6~~ 19.8
Span Calibration- Left	0%	4.2	25	8.2	50%	12.6	75%	16.4	100%	19.8

Switch Calibration	Setpoint Found	N/A	Setpoint Left	N/A

System	NH3 System
Location	NH3 Service Platform
Technician	Hill / Hinson
Completion Date	5-16-2019

Manufacturer	Fluke	Manufacturer	Fluke
Model	700DP5	Model	754
Serial Number	457734	Serial Number	2308008
Calibration Due Date	4-9-2020	Calibration Due Date	3-9-2019

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	TE-403B
Instrument Name	McGrath Scr Catalyst Inlet Temp Element (B-255-TE-403B)

Zero		Span	Units
Alarm 1 Setpoint		Alarm 2 Setpoint	
Alarm 1 Inc/Dec		Alarm 2 Inc/Dec	

	0%	25	50%	75%	100%
	32	300	600	900	1200
Span Calibration-Found	31.8	301.8	600.1	900.3	1200.7
Span Calibration-Left	31.8	301.8	600.1	900.3	1200.7

Switch Calibration	Setpoint Found		Setpoint Left

System	Emmissions Reduction
Location	SCR Catalyst

Technician	Scott Hinson	Completion Date	5-15-19

Manufacturer	Fluke	Manufacturer	Fluke
Model	91025	Model	9144
Serial Number	B28355	Serial Number	B2A126
Calibration Due Date	4-9-2020	Calibration Due Date	4-9-2020

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	TE-404B
Instrument Name	McGrath Scr Catalyst Outlet Temp Element (B-255-TE-404B)

Zero		Span		Units						
Alarm 1 Setpoint				Alarm 2 Setpoint						
Alarm 1 Inc/Dec				Alarm 2 Inc/Dec						
		32		300		600		900		1200
Span Calibration-Found	0%	32.2	25	300.6	50%	601.2	75%	902.5	100%	1200.9
Span Calibration-Left	0%	32.2	25	300.6	50%	601.2	75%	902.5	100%	1200.9
Switch Calibration	Setpoint Found					Setpoint Left				
System	Emmissions Reduction									
Location	SCR Catalyst									
Technician	Scott Hilson			Completion Date	5-15-19					

Manufacturer	Fluke	Manufacturer	Fluke
Model	91025	Model	9144
Serial Number	B28355	Serial Number	B2A126
Calibration Due Date	4-9-2020	Calibration Due Date	4-9-2020

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	TE-404A
Instrument Name	McGrath Scr Catalyst Outlet Temp Element (B-255-TE-404A)

Zero		Span	Units
Alarm 1 Setpoint		Alarm 2 Setpoint	
Alarm 1 Inc/Dec		Alarm 2 Inc/Dec	

Span Calibration-Found	0%	32 / 32.2	25	300 / 300.4	50%	600 / 600.3	75%	900 / 900.1	100%	1200 / 1200.9
Span Calibration-Left	0%	32.2	25	300.4	50%	600.3	75%	900.1	100%	1200.9

Switch Calibration	Setpoint Found		Setpoint Left

System	Emmissions Reduction
Location	SCR Catalyst
Technician	SCOTT Hinson
Completion Date	5-15-19

Manufacturer	Fluke	Manufacturer	Fluke
Model	9102S	Model	9144
Serial Number	B28355	Serial Number	B2A126
Calibration Due Date	4-9-2020	Calibration Due Date	4-9-2020

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	PDIT-403
Instrument Name	SCR Catalyst Pres Drop Transmitter W/ Ind (B-255-PDIT-403)

Zero	0	Span	10	Units	"WG
Alarm 1 Setpoint			Alarm 2 Setpoint		
Alarm 1 Inc/Dec			Alarm 2 Inc/Dec		

	0%	25	50%	75%	100%
◎ Span Calibration- Found	0 4.36	2.5 8.2	5 12.2	7.5 16.2	10 20.5
◎ Span Calibration- Left	4.36	8.2	12.2	16.2	20.5

◎ Switch Calibration Setpoint Found: N/A Setpoint Left: N/A

System	NH3 System		
Location	NH3 Service Platform		
Technician	Hill / Hinson	Completion Date	5-16-2019

Manufacturer	Fluke	Manufacturer	Fluke
Model	700DP5	Model	754
Serial Number	457734	Serial Number	2308008
Calibration Due Date	4-9-2020	Calibration Due Date	3-9-2019

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	TE-403D
Instrument Name	McGrath Scr Catalyst Inlet Temp Element (B-255-TE-403D)

Zero		Span		Units					
Alarm 1 Setpoint				Alarm 2 Setpoint					
Alarm 1 Inc/Dec				Alarm 2 Inc/Dec					

		32		300		600		900	1200
Span Calibration-Found	0%	32.2	25	300.7	50%	600.8	75%	901.0	100% 1200.7
Span Calibration-Left	0%	32.2	25	300.7	50%	600.8	75%	901.0	100% 1200.7
Switch Calibration	Setpoint Found				Setpoint Left				

System	Emmissions Reduction
Location	SCR Catalyst
Technician	Scott Hinson
Completion Date	5-15-19

Manufacturer	Fluke	Manufacturer	Fluke
Model	91025	Model	9144
Serial Number	B28355	Serial Number	BZA126
Calibration Due Date	4-9-2020	Calibration Due Date	4-9-2020

Peaker & Solar Generation Division

Instrumentation Calibration Record
McGrath Peaker

Instrument Number	TE-403A
Instrument Name	McGrath Scr Catalyst Inlet Temp Element (B-255-TE-403A)

Zero		Span		Units					
Alarm 1 Setpoint				Alarm 2 Setpoint					
Alarm 1 Inc/Dec				Alarm 2 Inc/Dec					

		52		300		600		900	1200
Span Calibration-Found	0%	31.8	25	299.1	50%	600.6	75%	901.2	100%	1200.4
Span Calibration-Left	0%	31.8	25	299.1	50%	600.6	75%	901.2	100%	1200.4

Switch Calibration	Setpoint Found		Setpoint Left	

System	Emmissions Reduction
Location	SCR Catalyst

Technician	Scott Hinson	Completion Date	5-15-19

Manufacturer	Fluke	Manufacturer	Fluke
Model	9102S	Model	9144
Serial Number	B28355	Serial Number	B2A126
Calibration Due Date	4/9/2020	Calibration Due Date	4/9/2020

Instrumentation Calibration Record
McGrath Peaker

Peaker & Solar Generation Division

Instrument Number	TE-403C
Instrument Name	McGrath Scr Catalyst Inlet Temp Element (B-255-TE-403C)

Zero		Span	Units
Alarm 1 Setpoint		Alarm 2 Setpoint	
Alarm 1 Inc/Dec		Alarm 2 Inc/Dec	

	0%	25	50%	75%	100%
	32	300	600	900	1200
Span Calibration-Found	32.2	302.4	600.3	900.9	1200.6
Span Calibration-Left	32.2	302.4	600.3	900.9	1200.6

Switch Calibration	Setpoint Found	Setpoint Left

System	Emmissions Reduction
Location	SCR Catalyst
Technician	Scott Hinson
Completion Date	5-15-19

Manufacturer	Fluke	Manufacturer	Fluke
Model	9102S	Model	9114A
Serial Number	B28355	Serial Number	B2A126
Calibration Due Date	4-9-2020	Calibration Due Date	4-9-2020

Attachment 5

Fuel and Ammonia flowmeters calibrations records

Fuel flowmeter

Meter Maintenance & Controls Inc.
The Experts in Flow Control & Automation

1963 Essex Court
Redlands, CA 92373
(909)307-2295 Fax (909)307-2395
www.gommci.com

Certificate of Calibration

Calibration Date:	5/13/2019	**Certificate Lot Number:**	190513
Calibration Due Date:	5/13/2020	**Technician:**	Ricardo Linares
Customer:	McGrath Peaker, 251 N. Harbor Blvd., Oxnard, CA	**CA Weights & Measures ID:**	1918-30904

Calibrated Instrument Data

Equipment ID:	427111 (Sensor), 427110 (Flow Converter)	**Manufacturer:**	Yokogawa
Location:	Unknown-Device shipped to MMCI headquarters for calibration.	**Model Number:**	DY050S1-NBLBA4-2N/KF1/SCT (Sensor), DYAS1-D2N/KF1/SCT (Flow Converter)
Calibration Description:	Hydraulic calibration with direct totalizer comparison from flow meter to calibration standard indicated below. Flow meter is a 2" vortex style with remote flow converter.	**Serial Number:**	S5F505478 620 (Sensor), S5F505492 620 (Flow Converter)
Notes:	NA		

	As Found		As Left
Adjustment K	1.0000		1.0000
mA Output 1:	0 to 345 cf/min		0 to 345 cf/min
K-Factor:	8.833 Pulses/liter		8.833 Pulses/liter

Calibration Performance

Status:	Found (Hydraulic calibration of flow meter with direct totalizer comparison to MMCI standard)	**Units:**	US Gallons
		Tolerance:	± 0.80%

Test Rate/min	Sensor Total	Standard	Error Sensor/Standard		Pass/Fail
50	154.00	154.76	-0.49%		Pass
100	307.00	306.38	0.20%		Pass
150	319.00	318.49	0.16%		Pass

Status:	Left (Hydraulic calibration of flow meter with direct totalizer comparison to MMCI standard)	**Units:**	US Gallons
		Tolerance:	± 0.80%

Test Rate/min	Sensor Total	Standard	Error Sensor/Standard		Pass/Fail

Calibration Standards

Standard 1:	Gravimetric Prover, MOD: 4X4 HP-5K, SN: 95-5690, Due: 6/6/2019, NIST: 1197132	**Standard 3:**	
Standard 2:		**Standard 4:**	

Technician Signature _____

This device has been calibrated using standards traceable to the National Institute of Standards &Technology (NIST). This certificate shall not be reproduced in any form, except in full, without the expressed written consent of MMCI. Please refer to MMCI's contact information above regarding any questions associated with this certificate.

Fuel flow transmitter

Meter Maintenance & Controls Inc.
The Experts in Flow Control & Automation

1963 Essex Court
Redlands, CA 92373
(909)307-2295 Fax (909)307-2395
www.gommcl.com

Certificate of Calibration

Calibration Date:	5/13/2019
Calibration Due Date:	5/13/2020
Customer:	McGrath Peaker, 251 N. Harbor Blvd., Oxnard, CA

Certificate Lot Number:	190513
Technician:	Ricardo Linares
CA Weights & Measures ID:	1918-30904

Calibrated Instrument Data

Equipment ID:	427111 (Sensor), 427110 (Flow Converter)	Manufacturer:	Yokogawa
Location:	Unknown-Device shipped to MMCI headquarters for calibration.	Model Number:	DY050S1-NBLBA4-2N/KF1/SCT (Sensor), DYAS1-D2N/KF1/SCT (Flow Converter)
Calibration Description:	mA calibration of flow transmitter mA output #1	Serial Number:	S5F505478 620 (Sensor), S5F505492 620 (Flow Converter)

Notes:	NA

	As Found		As Left
Adjustment K	1.0000		1.0000
mA Output 1:	0 to 345 cf/min		0 to 345 cf/min
K-Factor:	8.833 Pulses/liter		8.833 Pulses/liter

Calibration Performance

Status:	Found (mA calibration of flow transmitter mA output with direct comparison to MMCI standard)	Units:	mA
		Tolerance:	±0.20%

Sensor Simulated mA	Standard Measured	Error Sensor/Standard			Pass/Fail
4.00	3.998	0.05%			Pass
8.00	7.998	0.03%			Pass
12.00	11.998	0.02%			Pass
16.00	15.998	0.01%			Pass
20.00	19.996	0.02%			Pass

Status:	Left (mA calibration of flow transmitter mA output with direct comparison to MMCI standard)	Units:	mA
		Tolerance:	±0.20%

Sensor Simulated mA	Standard Measured	Error Sensor/Standard			Pass/Fail

Calibration Standards

Standard 1:	Fluke 744, SN: 8060005, Due: 7/11/2019, NIST: 19-B2Z9L-20-1
Standard 2:	

Standard 3:	
Standard 4:	

Technician Signature _____

Ammonia flowmeter

Meter Maintenance & Controls Inc.
The Experts in Flow Control & Automation

1963 Essex Court
Redlands, CA 92373
(909)307-2295 Fax (909)307-2395
www.gommci.com

Certificate of Calibration

Calibration Date:	5/13/2019	Certificate Lot Number:	190513
Calibration Due Date:	5/13/2020	Technician:	Ricardo Linares
Customer:	McGrath Peaker, 251 N. Harbor Blvd., Oxnard, CA	CA Weights & Measures ID:	1918-30904

Calibrated Instrument Data

Equipment ID:	457823	Manufacturer:	Micro Motion
Location:	Unknown	Model Number:	CMF025M313NQBUEZZZ (Sensor), 1700R11ABUEZZZ (Xmtr)
Calibration Description:	Hydraulic calibration with direct totalizer comparison from flow meter to calibration standard indicated below. Flow meter is a 0.25" coriolis with remote transmitter.	Serial Number:	14358175 (Sensor), 3215549 (Xmtr)
Notes:	NA		

	As Found		As Left
Flo Cal Factor:	5.1149		5.1149
mA Output 1:	0 to 150 lb/hr		0 to 150 lb/hr
Pulse Out:	25,000 pulses/lb		25,000 pulses/lb

Calibration Performance

Status:	Found (Hydraulic calibration of flow meter with direct totalizer comparison to MMCI standard)	Units:	Pounds
		Tolerance:	± 0.50%

Test Rate/Hour	Sensor Total	Standard	Error Sensor/Standard		Pass/Fail
75	6.187	6.185	0.03%		Pass
100	8.355	8.350	0.06%		Pass
150	12.563	12.560	0.02%		Pass

Status:	Left (Hydraulic calibration of flow meter with direct totalizer comparison to MMCI standard)	Units:	Pounds
		Tolerance:	± 0.50%

Test Rate/Hour	Sensor Total	Standard	Error Sensor/Standard		Pass/Fail

Calibration Standards

Standard 1:	Torrey Scale, Mod: L-EQ 10/20, SN: I16-006363, Due: 6/12/2018, NIST: 2384501	Standard 3:	
Standard 2:		Standard 4:	

Technician Signature _____

ammonia transmitter

Meter Maintenance & Controls Inc.
The Experts in Flow Control & Automation

1963 Essex Court
Redlands, CA 92373
(909)307-2295 Fax (909)307-2395
www.gommci.com

Certificate of Calibration

Calibration Date:	5/13/2019
Calibration Due Date:	5/13/2020
Customer:	McGrath Peaker, 251 N. Harbor Blvd., Oxnard, CA

Certificate Lot Number:	190513
Technician:	Ricardo Linares
CA Weights & Measures ID:	1918-30904

Calibrated Instrument Data

Equipment ID:	457823	Manufacturer:	Micro Motion
Location:	Unknown	Model Number:	CMF025M313NQBUEZZZ (Sensor), 1700R11ABUEZZZ (Xmtr)
Calibration Description:	Calibration of transmitter mA output	Serial Number:	14358175 (Sensor), 3215549 (Xmtr)
Notes:	NA		

	As Found		As Left
Flo Cal Factor:	5.1149		5.1149
mA Output 1:	0 to 150 lb/hr		0 to 150 lb/hr
Pulse Out:	25.000 pulses/lb		25.000 pulses/lb

Calibration Performance

Status:	Found (mA calibration of flow transmitter mA output with direct comparison to MMCI standard)	Units:	mA
		Tolerance:	± 0.20%

Sensor Simulated mA	Standard Measured	Error Sensor/Standard			Pass/Fail
4.00	3.996	0.10%			Pass
8.00	7.997	0.04%			Pass
12.00	11.997	0.03%			Pass
16.00	15.997	0.02%			Pass
20.00	19.997	0.02%			Pass

Status:	Left (mA calibration of flow transmitter mA output with direct comparison to MMCI standard)	Units:	mA
		Tolerance:	± 0.20%

Sensor Simulated mA	Standard Measured	Error Sensor/Standard			Pass/Fail

Calibration Standards

Standard 1:	Fluke 744, SN: 8060005, Due: 7/11/2019, NIST: 19-B2Z9L-20-1
Standard 2:	

Standard 3:	
Standard 4:	

Technician Signature _____

Attachment 6

Generator and Engine Specification

Waukesha VGF Series

A New Look At Reliable, Compact, Low Emission Gas Engines.

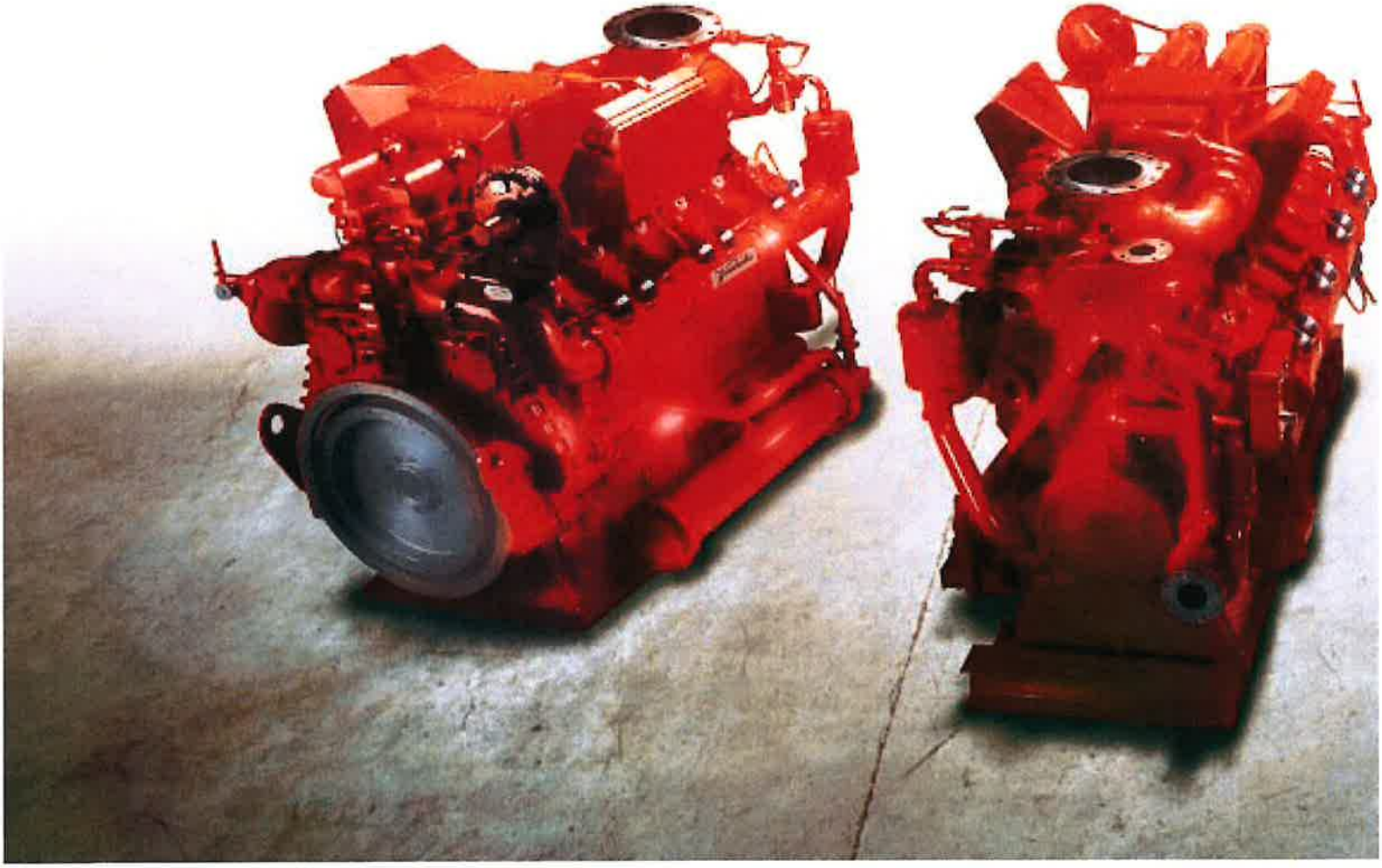
A Family of Compact Engines

Whether you're designing an engine package for a new installation or retrofitting an engine room, space is always an issue. Your customers want more power squeezed into smaller spaces. So, how do you reconcile the need for more power and limited space? Simple, size up the Waukesha VGF family of gas engines. This series of compact, fuel efficient, low emission gas engines comes in 6, 8, 12 and 16 cylinder outputs with both inline and vee configurations to meet almost any installation requirements.

Driving Down the Cost of Horsepower.

This compact engine is purposely designed from the ground up for stationary, spark ignited, gaseous fuel applications. The VGF is not limited to weight-sensitive mobile equipment requirements. Its high weight-to-power ratio provides a solid foundation for years of consistent and dependable operation. For the size and price of other high speed engines, the VGF provides full power around the clock, with substantially reduced maintenance and operating costs. You get more engine, more reliability, more performance, more uptime, and more value – at less cost.

Because of their size to power ratio and high speed continuous-duty capability, VGF engines are remarkably cost-effective to



their "clean" design requires less piping.

Strong Resemblance.

The VGF Series reflects Waukesha's usual robust structural strength, along with sophisticated engineering features. Derived from the design and manufacturing integrity of the classic Waukesha VHP, these engines have inherently long component life. So overhaul intervals will be few and far between. The performance and durability of the VGF Series make this engine line a design classic in itself.

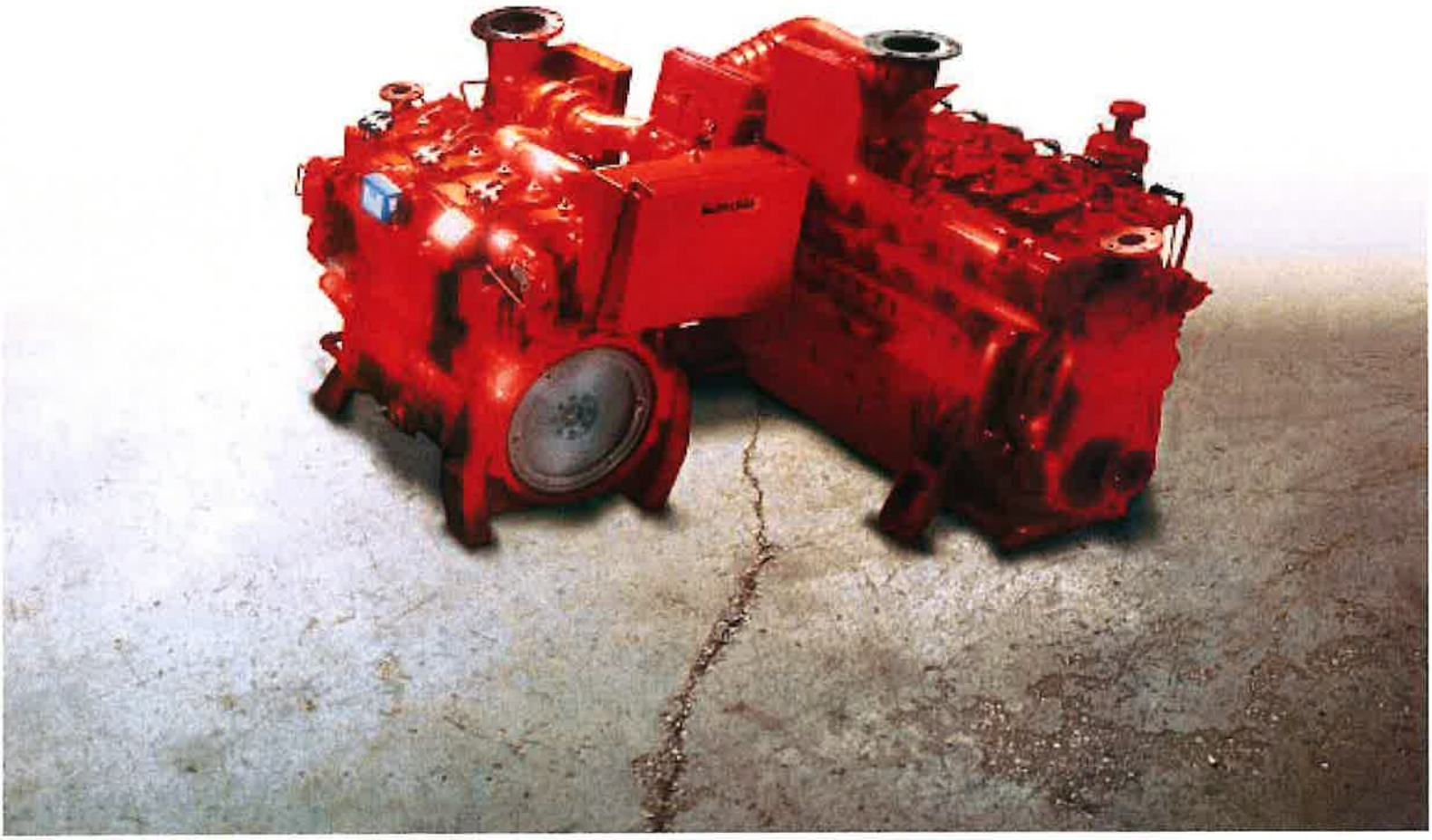
Fast and Lean.

VGF engines lead a clean life, thanks to Waukesha's lean burn technology. Our patented combustion system allows the VGF engine to meet clean air standards throughout the world. (Consult your distributor for site specific requirements.) Both GL (Gas Lean Burn) and GLD (Gas Lean Burn Draw Thru) models are available as standard engines. They are designed to run efficiently with high *or* low fuel pressure systems for maximum application flexibility.

The VGF is also available in a rich burn naturally aspirated version (G) for applications where less horsepower is required or a 3-way catalyst is desired.

The Waukesha VGF Series. Simple to buy. Simple to install. Simple to run. Simple to meet emissions requirements. Simple to maintain. How much simpler can we make your engine choice?

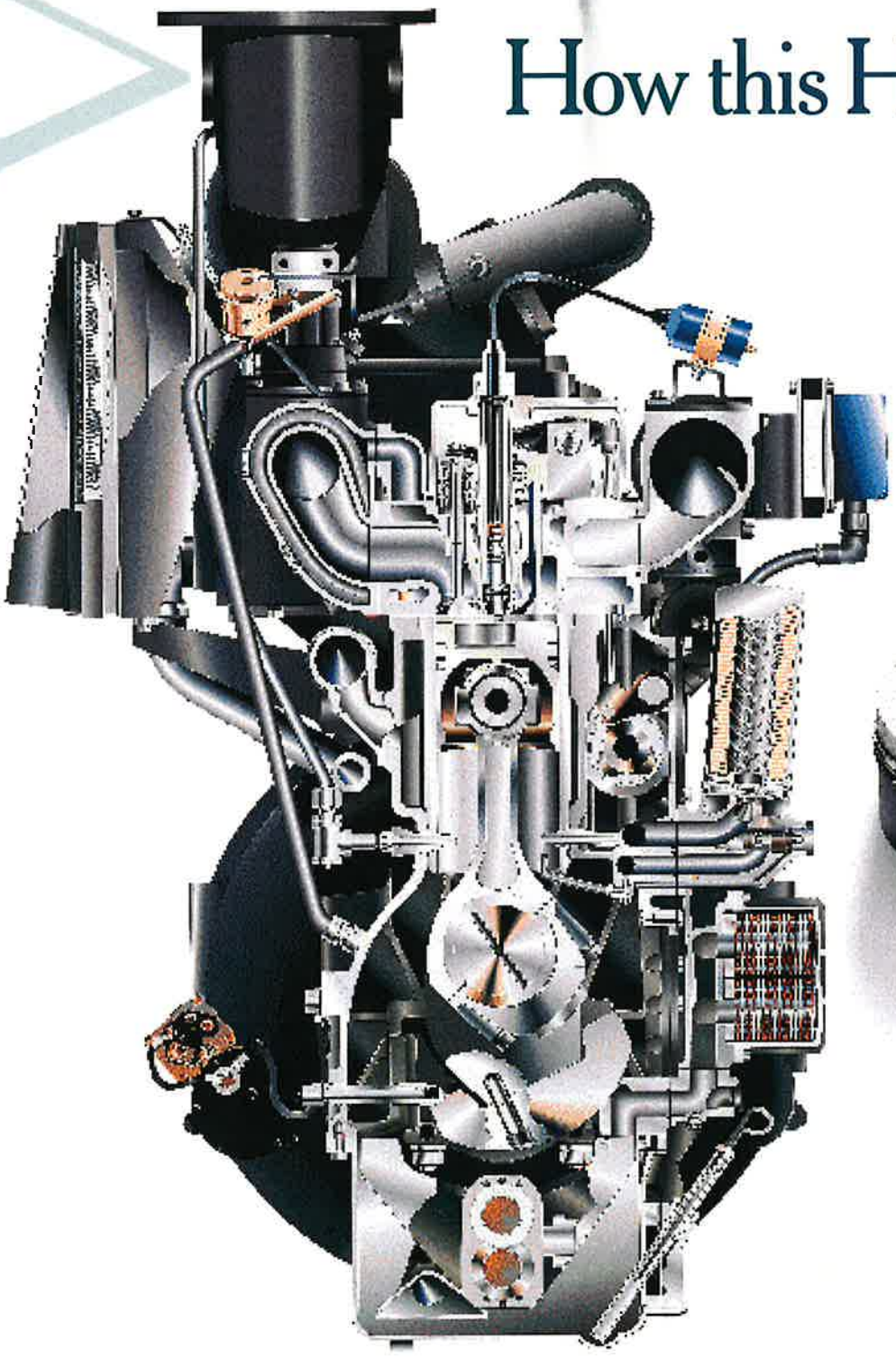
to Fit Your Requirements.



VGF

First of all, we need to drive home a simple point. This is not a warmed over automotive engine designed for occasional rpm spikes. The VGF is industrial strength continuous high rpm horsepower in a range from 160 BHP (120 KWb) to 1065 BHP (800 KWb).

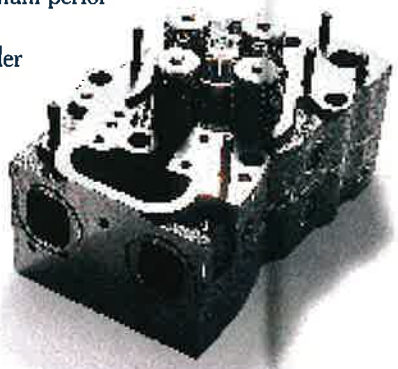
How this Hard-Working



- The *GL (Lean Burn) fuel system and high turbulence combustion chamber* provide excellent fuel efficiency and optimum combustion stability.
- VGF's *optimum BMEP* results in better service life for key components and long maintenance intervals.
- *Patented high turbulence combustion chamber* allows ability to burn lean air fuel mixtures with an open combustion chamber. This produces low emissions across engine load and speed range. It also provides lower fuel consumption, which is typically 91% of life cycle costs.

- *Low fuel pressure GLD model* has draw-thru carburetion capability which increases application potential. It allows operation with

■ *Individual, four valve, water cooled cylinder heads* ensure optimum performance and reliability. Cooler cylinder head operation results in longer valve train component life and lower maintenance cost.



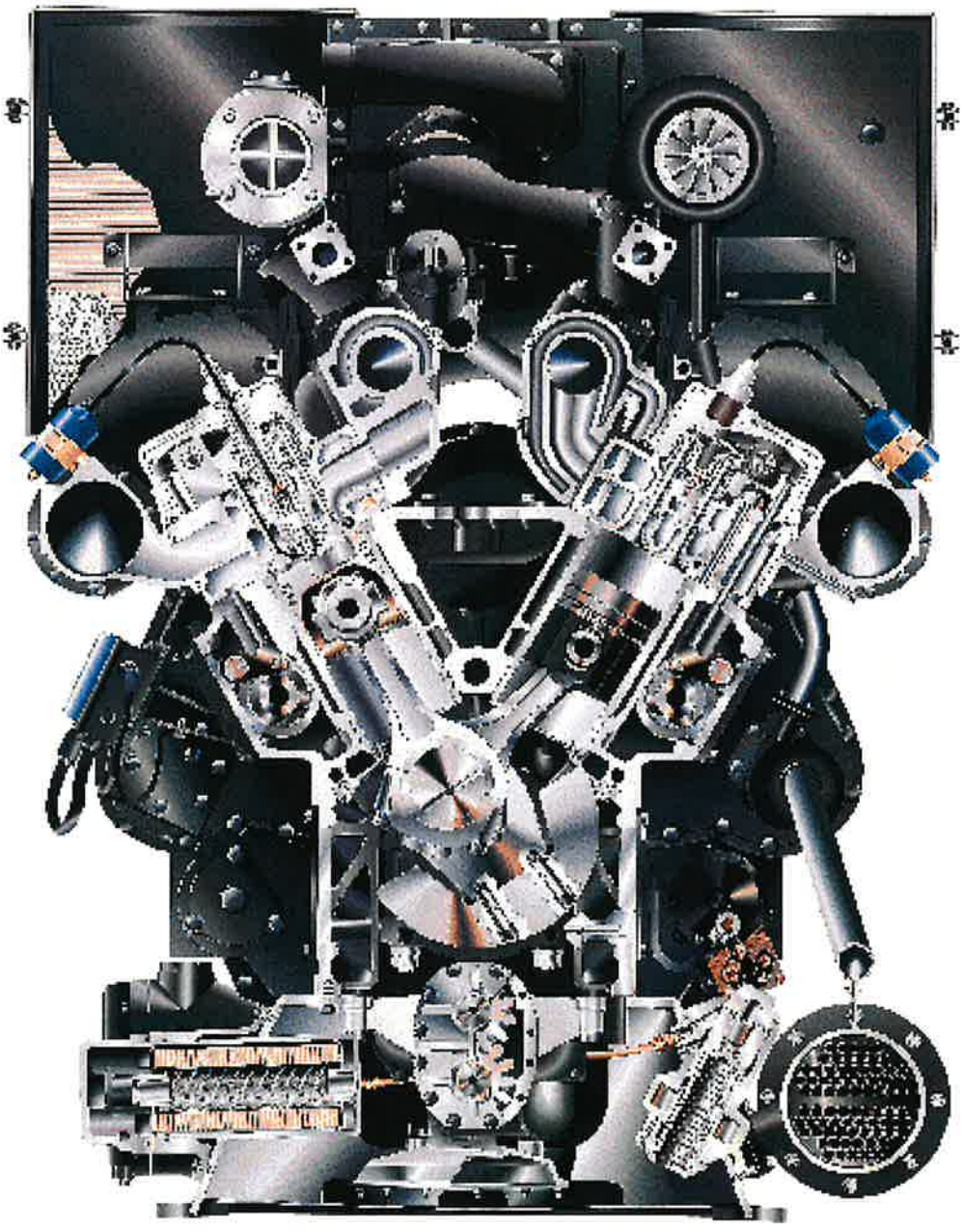
Engine Works so Well.

■ Waukesha's *multi-fuel capability* means you have various options for primary fuel requirements – unlike typical dual fuel systems where one fuel is used for primary requirements and the second fuel as back-up. The VGF is adaptable to natural gas and propane as well as digester gas and even landfill gas.

■ Standard *Custom Engine Control*® (CEC) Ignition Module provides precise timing and control for reduced emissions and fuel costs. No wearing parts means consistent ignition performance and lower maintenance costs.

■ Because of the *tremendous torque* of VGF engines, RPMs can be turned down to reduce fuel consumption and still maintain constant torque capability.

■ When required by local restrictions, the VGF can be ordered in a *rich burn draw*

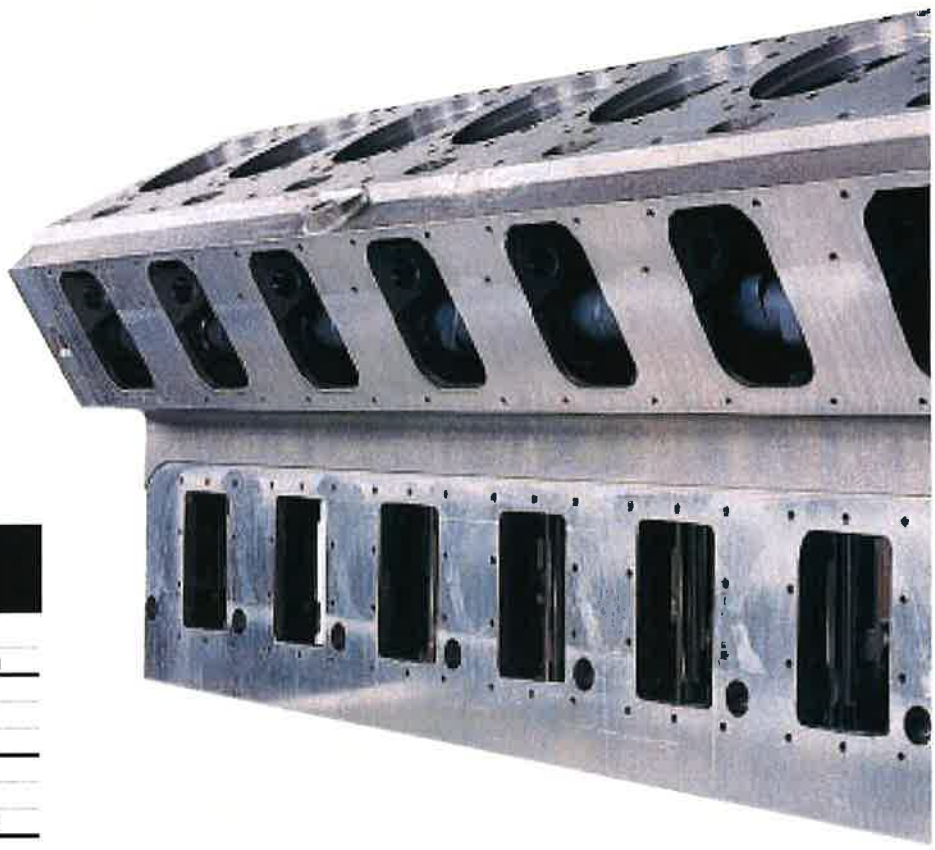


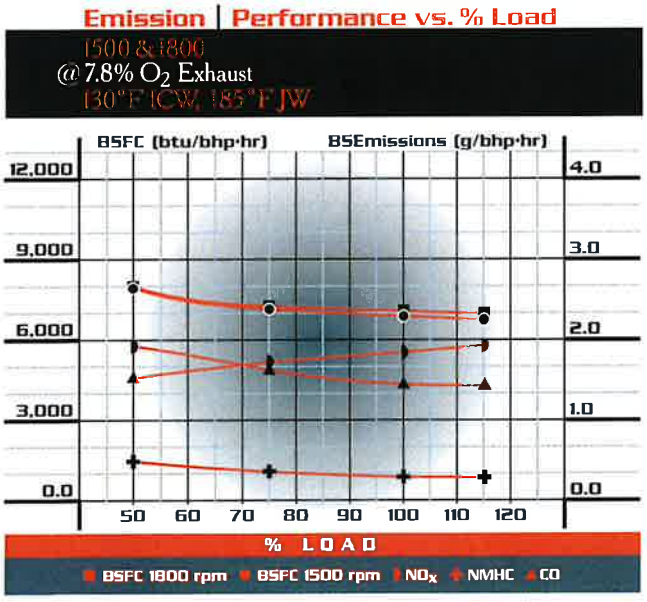
High temperature cooling capability increases heat recovery opportunities, making the VGF a better fit for chiller or cogeneration applications.

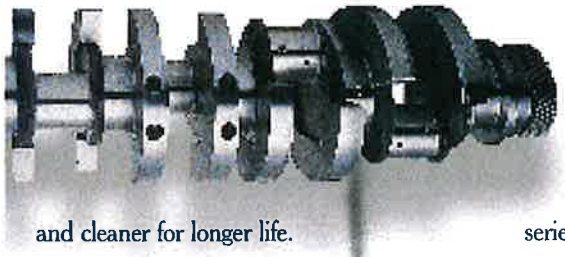
Virtually all *wearing components* of the VGF series are *interchangeable* across the VGF engine series. This includes major components – pistons, rings, sleeves, connrods, cylinder heads, bearings and valve train parts. So not only do you have proven component reliability, you have lower parts inventory requirement even if you're running different models of the VGF.

A fully counterweighted crankshaft helps prevent engine vibration for a smoother running package. It minimizes main and rod bearing loads and maximizes component life. VGF shafts are T-drilled for continuous lubrication of main bearings, keeping them cooler

Engine Performance Refle







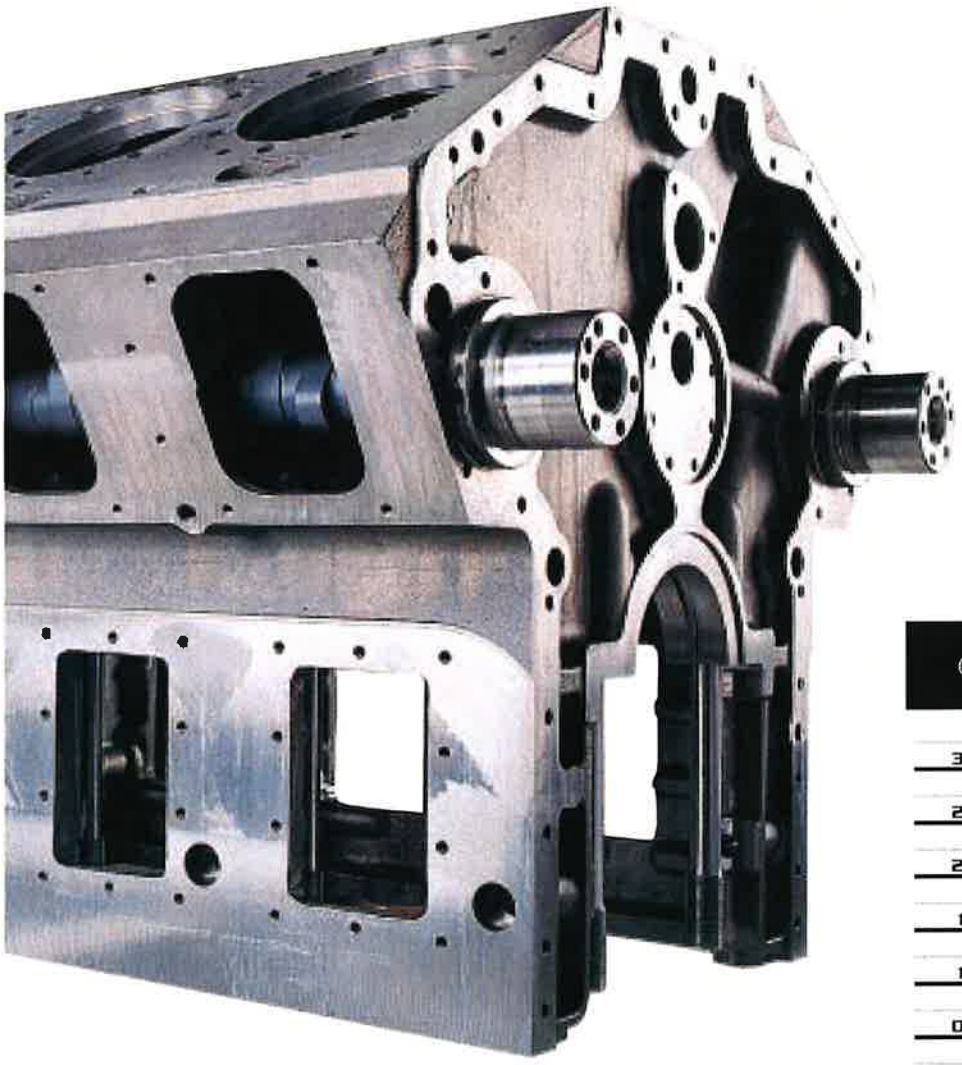
and cleaner for longer life.

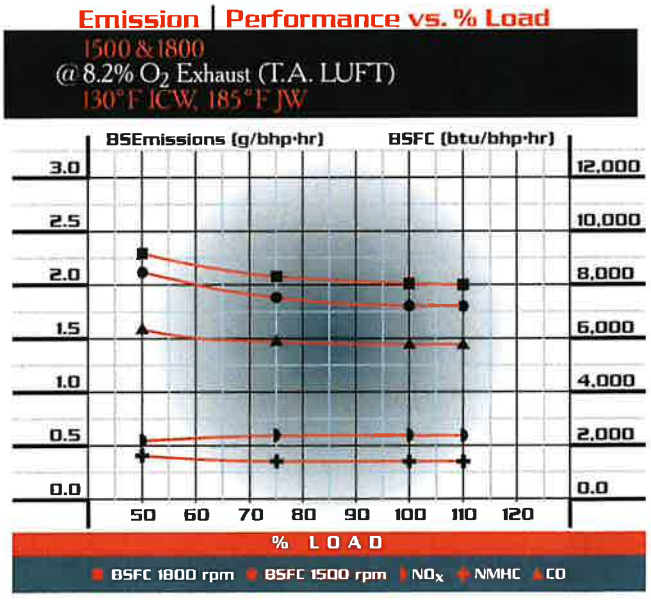
- *Flanged connection points* make installation and alignment easy. Compact packaging simplifies set-up and adjustments for reduced costs.
- *Maintenance is simplified* because the size of the engine and the thoughtful location of service points and controls places everything conveniently within the technician's reach. The VGF engine series allows *complete in-place maintenance and in-frame overhaul.* All VGFs have camshaft and connrod/crankshaft inspection doors. Vee engines have a base-type oil pan with inspection doors.

All these features point to the fact that the VGF is intelligently designed and quality built to provide you with a compact, high speed gas engine in the Waukesha tradition of rugged reliability. This is an engine that will work long and hard for you. And it will have overhaul intervals so far apart you'll forget the meaning of downtime.

When it comes to life cycle numbers, the Waukesha VGF adds up to be the right choice.

cts Company Performance.



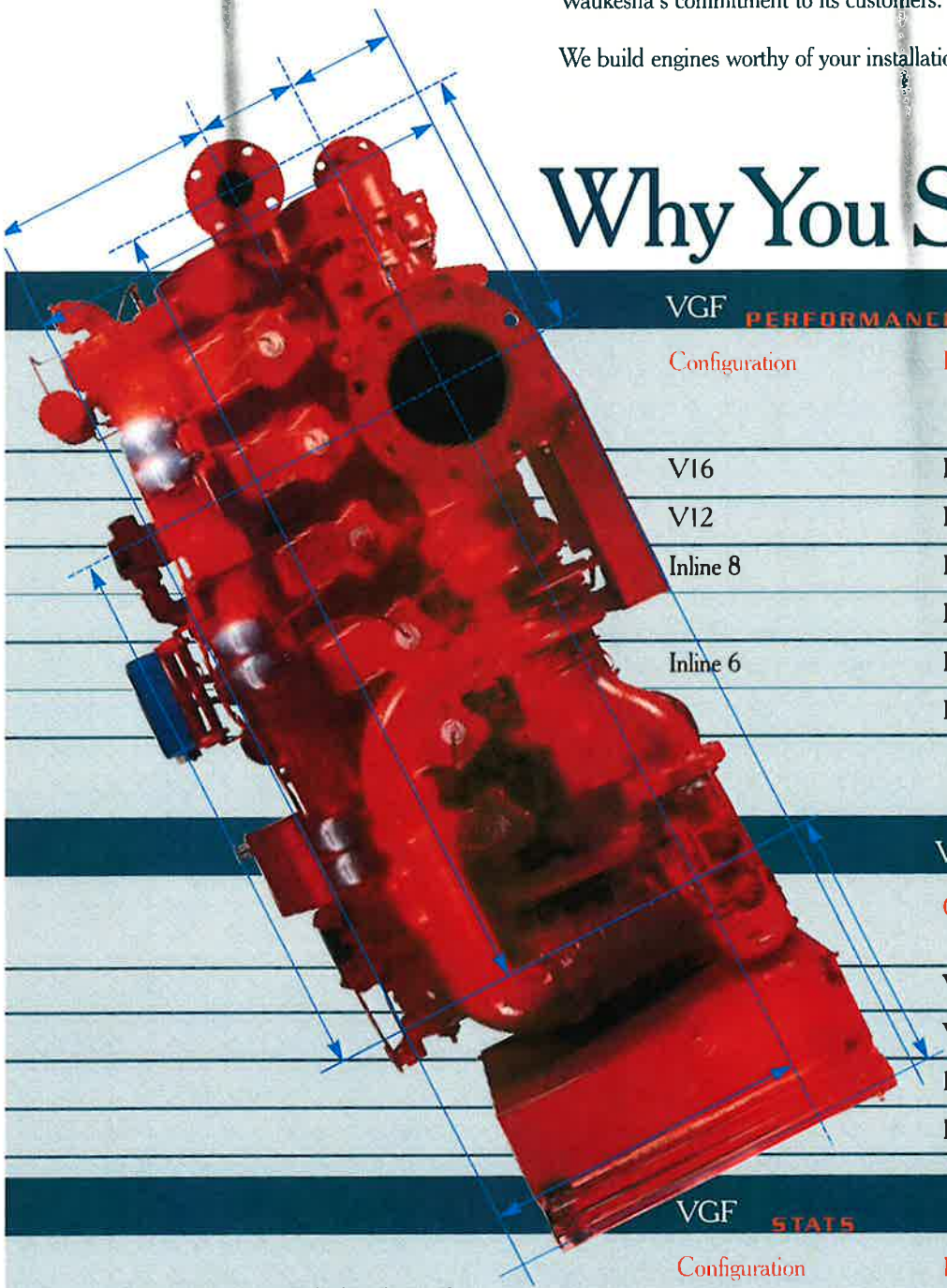


From design and development to manufacturing to total aftermarket support, the VGF family of engines symbolizes Waukesha's commitment to its customers. We build engines worthy of your installation and your investment. And we stand behind them with a worldwide distributor network.

The Best in the Business.

The VGF line is backed by the best warranty of any industrial engine manufacturer. On

Why You Should Specify



VGF PERFORMANCE

Configuration	Engine Model	Intercooler Water Temperature °F (°C)
V16	P48GL/GLD	130° (54°)
V12	L36GL/GLD	130° (54°)
Inline 8	H24GL/GLD	130° (54°)
	H24G	
Inline 6	F18GL/GLD	130° (54°)
	F18G	

VGF STANDBY RATINGS

Configuration	Engine Model
V16	P48GL/GLD
V12	L36GL/GLD
Inline 8	H24GL/GLD
Inline 6	F18GL/GLD

VGF STATS

All data are based on standard conditions of 29.54 inches Hg. (100 kPa) barometric pressure, 77°F (25°C) ambient and induction air temperature, 30% relative humidity at 0.3 inches Hg. (1 kPa) water vapor pressure, 185° F (85° C) engine jacket water outlet temperature. Rating fuel standard: Commercial quality dry natural gas.

Configuration	Engine Model	Bore x Stroke in (mm)
V16	P48GL/GLD	5.98 x 6.5 (152 x 165)
V12	L36GL/GLD	5.98 x 6.5 (152 x 165)
Inline 8	H24GL/GLD	5.98 x 6.5 (152 x 165)
	H24G	5.98 x 6.5 (152 x 165)
Inline 6	F18GL/GLD	5.98 x 6.5 (152 x 165)
	F18G	5.98 x 6.5 (152 x 165)

new engines, all parts and labor are covered for one full year. Five years on major forgings and castings. New service parts are warranted for one year along with the labor costs to replace them.

We built and backed this engine so you can be sure. The Waukesha VGF is the easy choice. The smart choice. The right choice.

the Waukesha VGF.

Continuous Brake Horsepower (kWb) at Indicated RPM

1200 rpm		1500 rpm		1800 rpm	
710	(530)	885	(660)	1065	(800)
530	(400)	665	(500)	800	(600)
355	(265)	445	(330)	530	(400)
215	(160)	265	(200)	320	(240)
265	(200)	330	(250)	400	(300)
160	(120)	200	(150)	240	(180)

Brake Horsepower (kW/b) at Indicated RPM

1500 rpm (50 Hz)		1800 rpm (60 Hz)	
1025	(765)	1230	(918)
770	(574)	920	(686)
510	(380)	615	(460)
385	(285)	460	(345)

Displacement cu in	(liters)	Weight lbs	(Kgs)	Height in	(mm)	Length in	(mm)	Width in	(mm)
2924	(48)	14,900	(6,759)	75.5	(1918)	106.5	(2705)	62.0	(1574)
2193	(36)	11,525	(5,228)	75.5	(1918)	88.0	(2235)	62.0	(1574)
1462	(24)	7,200	(3,265)	68.0	(1727)	94.5	(2395)	50.0	(1264)
1462	(24)	7,200	(3,265)	68.0	(1727)	94.5	(2395)	50.0	(1264)
1096	(18)	5,500	(2,495)	68.0	(1727)	80.5	(2043)	50.0	(1264)
1096	(18)	5,500	(2,495)	68.0	(1727)	80.5	(2043)	50.0	(1264)

University of Illinois in Chicago installed an L36GL standby set.

Strong Work Ethic.

Waukesha has nearly a century of stationary gas engine experience in rugged applications all over the world. Simply put, Waukesha engines are built to work. The VGF continues that heritage.

The VGF is the perfect blend of compact size, brute strength and the right technology. No wasted weight, space or hardware. The result is an engine of timely design

The Proof is in

Waukesha VGF F18G drives 90 kW induction generator in parallel with utility for Canonsburg, Pennsylvania, wastewater treatment plant. Recovered heat is used to maintain temperature in digesters.

A landfill at Vlagheide in Schijndel, The Netherlands, has five H24GLDs efficiently generating electricity from low BTU landfill gas.

This F18GL engine compresses gas for Ocelot Energy, Inc. in south central Alberta, Canada.

Elkerlick Hospital in The Netherlands uses a P48GLD and an H24GLD for standby power and cogeneration.

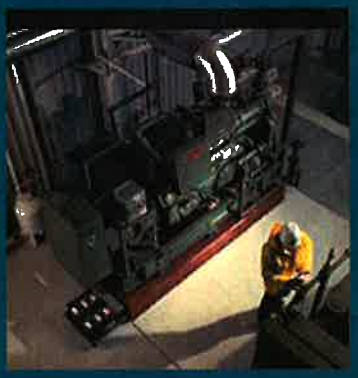
and enduring reliability. It is economical to own and operate. And it lends itself to extraordinary installation versatility.

The VGF is manufactured in the USA at Waukesha Engine Division in Wisconsin and in Europe at Waukesha Engine Division, Appingedam, The Netherlands.

Nearly one thousand VGF engines have been installed since product introduction in 1987.

A 700 kW VGF P48GL cogen system generates electricity and warehouse heat for this grain drying operation in Dungannon, Ontario.

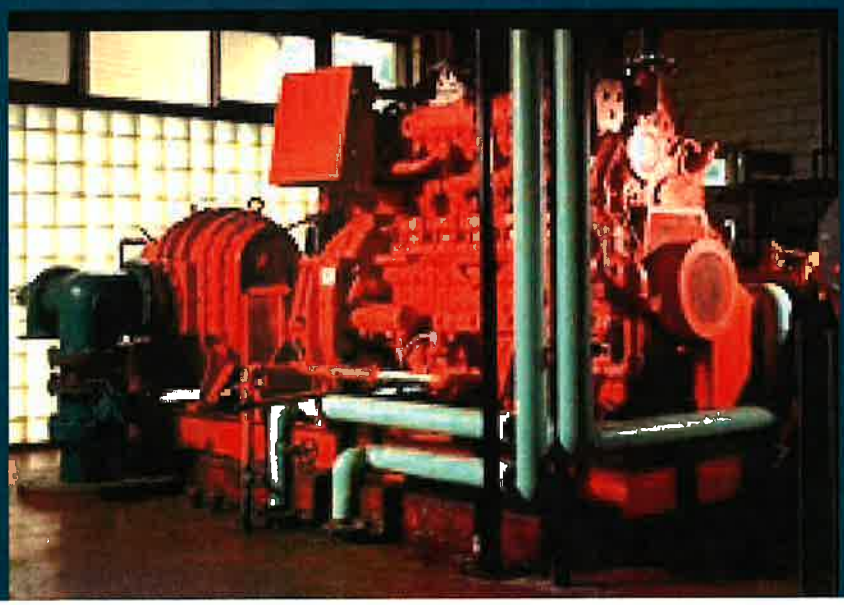
the Performance.



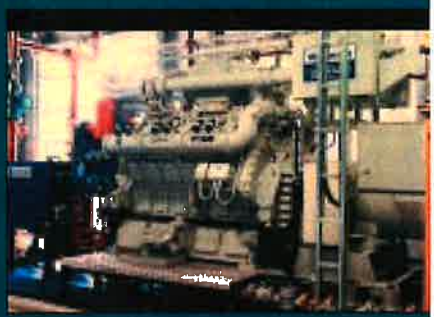
CNG Transmission Corp. in Utica, NY, has a VGF H24GL driving a 375 kW generator for standby electrical power at a compressor station.

This greenhouse in Antwerpen, Holland, obtains electricity and heat from an F18GLD cogeneration system.

A VGF H24GL genset rated at 350 kWe is used for peak shaving at Lethbridge Regional Hospital in Alberta, Canada. Exhaust heat is converted to steam via a waste heat boiler.



Greensburg Sewer Authority, Greensburg, PA, uses a digester gas powered VGF F18G for aeration in wastewater treatment. Recovered engine heat maintains temperature in digesters.



The Stegeman Meat Factory in Deventer, The Netherlands, has an L36GLD cogen system supplying electricity as well as hot water for absorption cooling.

DRESSER
Waukesha

Waukesha Engine
Dresser, Inc.
1000 West St. Paul Avenue
Waukesha, WI 53188-4999
Fax: (262) 549-2795
(262) 547-3311
waukeshaengine.dresser.com

Waukesha Engine
Dresser Industrial Products, b.v.
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9900 AH Appingedam, The Netherlands
Fax: (31) 596-628111
(31) 596-652222

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SM 07/01

CLIFFORD
Power Systems, Inc.

101 Industrial Blvd.
Mansfield, TX 76063-3611
Phone (817) 640-5544
Fax (817) 453-0219
Toll Free 1-800-888-5557

Equipment Proposed:

Kohler 625 KW Standby Generator
Model Number 600RZW
Engine Waukesha VGF L36GLD Lean-Burn
- Natural Gas Fueled
- Isochronous Governor
- Heavy duty dry type air filters
- Lube oil filters and drain connections to skid
- Unit mounted radiator with shell and fan guard
- 24-volt starter and alternator
- Battery with cables and mounting tray
- Battery charger 10 amp with charge rate meter
- Muffler critical type with flex connector

Engine block heater thermostatically controlled
Generator: 1800 RPM, PMG type excitation, 60 Hz, 3 phase, 480 volt, .25% constant voltage regulator, Class H insulation, direct flex disc drive, 10 or 12 lead reconnectable
Decision-Maker 550 Digital Generator Controller
- Detailed Specs Included at end of this document

All weather outdoor sound attenuated generator enclosure rated 85 dba @ 1 meter with interior lighting
1000 amp 100% rated main line circuit breaker mounted in connection box with GFI
Spring isolators
Dry contacts
Alternator heater
Woodward speed controller
Marathon DVR2000EC voltage regulator
Natural gas regulator 8" W.C.-2.5psig
Natural gas solenoid valve

Project Management Services
- Start-up, three up to 8-hour days including travel
- Training of owner's personnel at time of start up
- Operation of equipment at Wedlake Manufacturing in Tulsa, OK
- Factory load bank testing
- Submittal drawings
  - Dimensional drawings, Electrical drawings, Product specifications
- Production testing
- Technical assistance
- Operation and maintenance manuals for engine, generator and controls
- One (1) year warranty

Decision-Maker 550 Controller Details

Standards:
- NFPA 99
- NFPA 110, Level 1
- UL-508 (pending)

Hardware Features
- Alarm horn
- Battery circuits are fuse protected
- Controller mounts in four orientations locally or remotely up to a distance of 12 m (40 ft.)
- Five LED status indicating lights
- Latch-type emergency stop switch
- Vacuum fluorescent display
- Terminals for remote annunciator
- Three-position (run, off/reset, auto) selector switch

Shutdown Functions
Engine functions:

- Air damper fault, if equipped
- High coolant temperature
- High oil temperature
- Low coolant level
- Low oil pressure
- Overcrank
- Overspeed
- General functions:
- Auxiliary—(up to 7 analog inputs each with a high and low programmable shutdown level). NOTE: Non-ECM models have 5 programmable shutdowns)
- Auxiliary—Digital (up to 21 programmable shutdowns)
- ECM communications loss (ECM models only)
- Emergency stop
- Internal fault
- Master switch in off/reset position
- Master switch error
- Master switch open
- NFPA 110 fault

Generator functions:

- Alternator protection against overload and short circuits
- Locked rotor (failed to crank)
- Over AC output voltage
- Overfrequency
- Under AC output voltage
- Underfrequency

Warning Functions

Engine functions:

- Coolant temperature signal loss
- High battery voltage
- High coolant temperature
- Low battery voltage
- Low coolant temperature
- Low fuel (level or pressure)*
- Low oil pressure
- Oil pressure signal loss
- Speed sensor fault
- Starting aid fault
- Weak battery

General functions:

- Auxiliary—(up to 7 analog inputs each with a high and low programmable warning level). NOTE: Non-ECM models have 5 programmable warnings)
- Auxiliary—Digital (up to 21 programmable warnings)
- Battery charger fault*
- Emergency power system (EPS) supplying load
- Engine cooldown delay
- Engine start delay
- Load shed kW overload
- Load shed underfrequency
- Master switch not in auto
- NFPA-110 fault
- System ready

Generator functions:

- AC sensing loss
- Generator running
- Ground fault*
- Overcurrent
- Underfrequency
- Requires optional input sensors.

User-Defined Common Faults

The user customizes outputs through a menu of shutdowns and warnings.
User defines up to 21 relay driver outputs (RDOs), (relays not included) from the following list of functions:
Engine functions:

- Air damper fault, if equipped
- Coolant temperature signal loss
- High battery voltage
- High coolant temperature shutdown
- High coolant temperature warning
- High oil temperature (ECM models only)
- Low battery voltage

- Low coolant level
- Low coolant temperature
- Low fuel (level or pressure)*
- Low oil pressure shutdown
- Low oil pressure warning
- Oil pressure signal loss
- Overcrank
- Overspeed
- Speed sensor fault
- Starting aid
- System ready
- Weak battery

General functions:

- Battery charger fault*
- ECM communications loss (ECM models only)
- EEPROM write failure
- Emergency stop
- Engine cooldown delay
- Engine start delay
- EPS supplying load
- Internal fault
- Load shed kW overload
- Load shed underfrequency
- Master switch error
- Master switch not in auto
- Master switch to off
- NFPA 110 common alarm fault

Generator functions:

- AC sensing loss
- Alternator protection against overload and short circuits
- Generator running
- Ground fault
- Locked rotor (failed to crank)
- Overcurrent
- Overfrequency
- Overvoltage
- Underfrequency
- Undervoltage

* Requires optional input sensors.

NFPA-110 Common Alarms

Additional annunciated alarms including NFPA 110 alarms.

Engine functions:

- High battery voltage
- High coolant temperature shutdown
- High coolant temperature warning
- Low battery voltage
- Low coolant temperature warning
- Low fuel (level or pressure)*
- Low oil pressure shutdown
- Low oil pressure warning
- Overcrank
- Overspeed

General functions:

- Battery charger fault*
- Master switch not in auto
- NFPA 110 common alarm

*Requires optional input sensors.

Monitoring

Standard Equipment and Features

Alarm horn

Indicators:

- Not in auto (yellow)
- Program mode (yellow)
- System ready (green)
- System shutdown (red)
- System warning (yellow)
- Switches and standard features:
- Keypad, 16-button multi-function soft-membrane environmentally sealed
- Lamp test

- Switch, auto/off-reset/run (engine start)
- Switch, emergency stop (normally closed contacts)
- Vacuum fluorescent display with two lines of 20 characters

Displays

Some engine displays are dependent upon enhanced electronic engine control availability.

Engine monitoring (metric or English units):

- Ambient temperature (ECM models only)
- Battery voltage
- Coolant—pressure, temperature, and level (ECM models only)
- Engine start countdown
- Fuel—pressure, temperature, fuel rate, amount of fuel used during last run (ECM models only)
- Oil—pressure, temperature, level, and crankcase pressure
- RPM

Generator monitoring:

- Current (L1, L2, L3), ± 0.25% accuracy
- Frequency, ± 0.5% accuracy
- Kilowatts, total per phase (L1, L2, L3), ± 0.5% accuracy
- KVA, total per phase (L1, L2, L3), ± 0.5% accuracy
- KVAR, total absorbing/generating per phase (L1, L2, L3), ± 0.5% accuracy
- Percent alternator duty level (actual load kW/standby kW rating)
- Power factor per phase, leading/absorbing
- Voltage (line-to-line, line-to-neutral for all phases), ± 0.25% accuracy

Operational records:

- Event history (stores up to 100 system events)
- Last start date
- Number of starts
- Number of starts since last maintenance
- Operating days since last maintenance
- Operating mode—standby or prime power
- Run time (total, loaded and unloaded hours, and total kW hours)
- Run time since maintenance (total, loaded, and unloaded hours and total kW hours)
- System shutdowns
- System warnings
- Time, date, and day of week

Time delays:

- Crank cycles for on/pause
- Crank cycles for overcrank shutdown
- Engine cooldown
- Engine start
- Load shed
- Voltage, over- and under-
- Starting aid

System parameters:

- Current, rated
- ECM serial number (ECM models only)
- Engine model number
- Engine serial number
- Frequency
- Generator set model number
- Generator set serial number
- Generator set spec number
- kW Rating
- Phase, single and three
- Unit number
- Voltage
- Voltage configuration, wye or delta

Inputs

Customer and remote inputs:

- Analog inputs 0–5 VDC (up to 7 user-defined analog inputs with multiple shutdown and warning levels). NOTE: Non-ECM models have 4 programmable shutdowns)
- Digital contact (up to 21 user-defined digital inputs with shutdown or warning levels).
- Ground fault detector*
- Remote emergency stop
- Remote reset
- Remote 2-wire start

Digital inputs:

- Air damper fault, if equipped
- Battery charger fault*
- Emergency stop

Model: 600RZW

KOHLER POWER SYSTEMS

190–600 V Gas

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

Ratings Range

		Lean-Burn GLD Engine		Rich-Burn GSID Engine	
		60 Hz	50 Hz	60 Hz	50 Hz
Standby:	kW	620–625	524–528	600	500–504
	kVA	775–781	655–660	750	625–630
Prime:	kW	510–600	428–504	510–540	428–456
	kVA	638–750	535–630	638–675	535–570

Generator Set Ratings

				Lean-Burn GLD Engine			Rich-Burn GSID Engine		
				130°C Rise Standby	105°C Rise Prime	80°C Rise Prime	130°C Rise Standby	105°C Rise Prime	80°C Rise Prime
Alternator	Voltage	Ph	Hz	kW/kVA	kW/kVA	kW/kVA	kW/kVA	kW/kVA	kW/kVA
5M4032	120/208	3	60	620/775	590/738	570/713	600/750	535/669	535/669
	127/220	3	60	620/775	590/738	590/738	600/750	535/669	535/669
	139/240	3	60	625/781	595/744	570/713	600/750	540/675	540/675
	240/416	3	60	620/775	590/738	570/713	600/750	535/669	535/669
	277/480	3	60	625/781	595/744	570/713	600/750	540/675	540/675
	110/190	3	50	524/655	500/625	488/610	500/625	456/570	456/570
	115/200	3	50	524/655	500/625	472/590	500/625	456/570	456/570
	120/208	3	50	524/655	500/625	440/550	500/625	456/570	440/550
	220/380	3	50	524/655	500/625	488/610	500/625	456/570	456/570
	230/400	3	50	524/655	500/625	472/590	500/625	456/570	456/570
	240/416	3	50	524/655	500/625	440/550	500/625	456/570	440/550
5M4034	120/208	3	60	625/781	595/744	590/738	600/750	540/675	540/675
	127/220	3	60	625/781	595/744	595/744	600/750	540/675	540/675
	139/240	3	60	625/781	595/744	585/731	600/750	540/675	540/675
	240/416	3	60	625/781	595/744	590/738	600/750	540/675	540/675
	277/480	3	60	625/781	595/744	585/731	600/750	540/675	540/675
	110/190	3	50	528/660	504/630	500/625	504/630	456/570	456/570
	115/200	3	50	528/660	504/630	472/590	504/630	456/570	456/570
	120/208	3	50	528/660	504/630	428/535	504/630	456/570	428/535
	220/380	3	50	528/660	504/630	500/625	504/630	456/570	456/570
	230/400	3	50	528/660	504/630	472/590	504/630	456/570	456/570
	240/416	3	50	528/660	504/630	428/535	504/630	456/570	428/535
→ 5M4036	120/208	3	60	625/781	595/744	600/750	600/750	540/675	540/675
	127/220	3	60	625/781	595/744	570/713	600/750	540/675	535/669
	139/240	3	60	625/781	595/744	595/744	600/750	540/675	540/675
	220/380	3	60	625/781	595/744	595/744	600/750	540/675	540/675
	240/416	3	60	625/781	595/744	600/750	600/750	540/675	540/675
	277/480	3	60	625/781	595/744	595/744	600/750	540/675	540/675
	110/190	3	50	528/660	504/630	504/630	504/630	456/570	456/570
	115/200	3	50	528/660	504/630	504/630	504/630	456/570	456/570
	120/208	3	50	528/660	504/630	480/600	504/630	456/570	456/570
	220/380	3	50	528/660	504/630	504/630	504/630	456/570	456/570
	230/400	3	50	528/660	504/630	504/630	504/630	456/570	456/570
	240/416	3	50	528/660	504/630	480/600	504/630	456/570	456/570
5M4164	220/380	3	60	625/781	595/744	510/638	600/750	540/675	510/638
5M4166	220/380	3	60	625/781	595/744	595/744	600/750	540/675	540/675
5M4274	347/600	3	60	625/781	595/744	530/663	600/750	535/669	530/663
5M4276	347/600	3	60	625/781	595/744	565/706	600/750	540/675	540/675

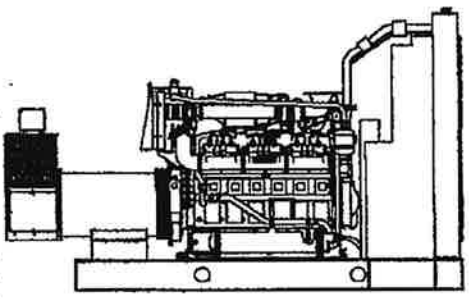
RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. *Rich Burn:* A 10% overload capacity is available for one hour in twelve. *Lean Burn:* A 5% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATION: *Altitude:* Derate 1% for each 150 m (492 ft.) elevation above 500 m (1640 ft.). *Temperature:* Derate 2% for each 10°C (18°F) temperature above 35°C (100°F).

G4-91 (600RZW) 1/05e

Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set complies with ISO 8528-5, Class G4 requirements for transient performance. *
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
  - The brushless, rotating-field alternator has broadrange reconnectability.
  - The pilot-excited, permanent-magnet (PM) alternator provides superior short-circuit capability.
- Other features:
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - The generator set is direct-mounted to the skid.
  - An electronic, isochronous governor delivers precise frequency regulation.
  - Electronic engine controls manage the engine.
  - Lean-burn natural gas technology provides maximum power and fuel efficiency.
  - Rich-burn natural gas technology reduces harmful exhaust emissions when used with a catalytic converter.

* This generator set does not meet NFPA 110 requirements for the one-step load acceptance and the 10-second start sequence.



Alternator Specifications

Specifications	Alternator
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet, Pilot Exciter
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H, Synthetic, Nonhygroscopic
Temperature rise	130°C, 150°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Rotor balancing	125% (60 Hz), 150% (50 Hz)
Voltage regulation, no-load to full-load (with <0.5% drift due to temp. variation)	3-phase, ±0.25%
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
480 V/380 V 5M4032 (10 lead)	2200 (60Hz), 1375 (50Hz)
480 V/380 V 5M4034 (10 lead)	2600 (60Hz), 1750 (50Hz)
480 V/380 V 5M4036 (10 lead)	3150 (60Hz), 2100 (50Hz)
380 V 5M4164 (4 lead)	2250 (60Hz)
380 V 5M4166 (4 lead)	2750 (60Hz)
600 V 5M4274 (4 lead)	1545 (60Hz)
600 V 5M4276 (4 lead)	2800 (60Hz)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state, volts-per-hertz voltage regulator with ±0.25% no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Waukesha Engine	
Engine model		
Lean-Burn GLD Engine	VGF L36GLD, 4-Cycle	
Rich-Burn GSID Engine	VGF L36GSID, 4-Cycle	
Engine type	Turbocharged, Intercooled	
Cylinder arrangement	12 V	
Displacement, L (cu. in.)	36 (2198)	
Bore and stroke, mm (in.)	152 x 165 (5.98 x 6.5)	
Compression ratio		
Lean-Burn GLD Engine	11:1	
Rich-Burn GSID Engine	8.7:1	
Piston speed, m/min. (ft./min.)	594 (1950)	495 (1625)
Main bearings: quantity, type	7, Half Shell	
Rated rpm	1800	1500
Max. power at rated rpm, kWm (BHP)		
Lean-Burn GLD Engine	690 (925)	574 (770)
Rich-Burn GSID Engine	656 (880)	548 (735)
Cylinder head material	Cast Iron	
Piston: type, material	Aluminum Alloy	
Crankshaft material	Forged Steel	
Valve material, intake/exhaust:	Hard-Faced Steel	
Governor: type, make/model	Electronic	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±0.50%	
Frequency	Field-Convertible	
Air cleaner type, all models	Dry	

Fuel

Fuel System	60 Hz	50 Hz
Fuel type	Natural Gas	
Fuel supply line inlet, mm (in.)	50.8 (2) ANSI 125 lb. Flange	
Natural gas fuel supply pressure, measured at the generator set fuel inlet after any fuel system equipment accessories, kPa (oz./in.^{2})	2-34 (4.6-80)	
Particulate filter requirement, mm (in.)	0.005 (0.0002)	

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust flow at rated kW, m^3/min. (cfm)		
Lean-Burn GLD Engine	135 (4765)	108 (3816)
Rich-Burn GSID Engine	106 (3755)	84 (2982)
Exhaust temperature at rated kW, dry exhaust, °C (°F)		
Lean-Burn GLD Engine	450 (843)	427 (800)
Rich-Burn GSID Engine	600 (1114)	579 (1074)
Maximum allowable back pressure, kPa (in. Hg)	3.73 (1.1)	
Engine exhaust outlet size, mm (in.)	See ADV Drawing	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition system	Electronic	
Battery charging, min.	Requires Float/Equalizer Battery Charger, 24 V, 10 A	
Starter motor rated voltage (DC)	24	
Battery, recommended cold cranking amps (CCA):		
Qty., CCA rating	2, 1150	
Battery voltage (DC)	12	

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	—	
Oil pan capacity with filter, L (gal.)	163 (43)	
Oil filter: quantity, type	2, Cartridge	
Oil cooler	Water-Cooled	
Oil requirements	SAE40 Allowable Sulfated Ash Content by Weight 0.5-1.0% (GLD) 0.35-0.5% (GSID)	

Application Data

Cooling

Radiator System	60 Hz	50 Hz
Ambient temperature, °C (°F)	38 (100)	
Engine jacket water capacity, L (gal.)	166 (44)	
Engine auxiliary water capacity, L (gal.)	57 (15)	
Radiator jacket water capacity, including engine, L (gal.)	357 (94)	
Radiator auxiliary water capacity, including engine, L (gal.)	224 (59)	
Minimum engine jacket water flow, Lpm (gpm)		
Lean-Burn GLD Engine	825 (218)	697 (184)
Rich-Burn GSID Engine	997 (263)	841 (222)
Minimum engine auxiliary water flow, Lpm (gpm)	235 (62)	197 (52)
Heat rejected to cooling water at standby rated kW, wet exhaust, kW (Btu/min.)		
Lean-Burn GLD Engine	649 (26920)	401 (22780)
Rich-Burn GSID Engine	574 (32670)	476 (27080)
Heat rejected to auxiliary cooling water at standby rated kW, wet exhaust, kW (Btu/min.)		
Lean-Burn GLD Engine	182 (10370)	128 (7300)
Rich-Burn GSID Engine	131 (7470)	102 (5800)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	1829 (72)	
Fan, kWm (HP)	31 (42)	19 (25)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

Operation Requirements

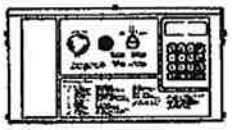
Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m^3/min. (scfm)*	1690 (59700)	1410 (49800)
Combustion air, m^3/min. (scfm)		
Lean-Burn GLD Engine	52 (1820)	42 (1485)
Rich-Burn GSID Engine	33 (1180)	27 (965)
Heat rejected to ambient air, kW (Btu/min.):		
Lean-Burn GLD Engine	34 (1933)	31 (1783)
Rich-Burn GSID Engine	42 (2383)	39 (2233)
Alternator	42 (2383)	35 (1960)

* Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption†	60 Hz		50 Hz	
Natural Gas, m^3/hr. (cfh) at % load	Lean-Burn Standby Rating			
100%	202	(7153)	164	(5794)
75%	159	(5603)	128	(4533)
50%	115	(4054)	93	(3271)
25%	71	(2504)	57	(2010)
Natural Gas, m^3/hr. (cfh) at % load	Lean-Burn Prime Rating			
100%	194	(6851)	157	(5549)
75%	152	(5377)	123	(4348)
50%	111	(3903)	89	(3148)
25%	69	(2429)	55	(1948)
Natural Gas, m^3/hr. (cfh) at % load	Rich-Burn Standby Rating			
100%	201	(7105)	165	(5819)
75%	159	(5602)	129	(4569)
50%	116	(4098)	94	(3319)
25%	73	(2594)	59	(2070)
Natural Gas, m^3/hr. (cfh) at % load	Rich-Burn Prime Rating			
100%	186	(6559)	152	(5364)
75%	147	(5192)	120	(4228)
50%	108	(3825)	88	(3092)
25%	70	(2468)	55	(1956)

† Fuel energy content = 35.38 MJ/m^3 (900 Btu/scft) saturated lower heating value.

Controller



Decision-Maker™ 550 Controller
Audiovisual annunciation.
Programmable microprocessor logic and digital display features.
Alternator safeguard circuit protection.
24-volt engine electrical system capability.
Remote start, remote annunciation, and remote communication options.
Refer to G6-46 for additional controller features and accessories.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-565-3381, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KohlerPowerSystems.com

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-8422, Fax (65) 6264-8455

Standard Features and Accessories

Standard Features

- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Alternator Protection
- Oil Drain Extension
- Operation and Installation Literature
- Radiator Duct Flange

Accessories

Enclosed Unit

- [x] Sound Enclosure ~~(with enclosed critical silencer)~~
- [ ] Weather Enclosure (with enclosed critical silencer)

~~**Open Unit**~~

- [x] Exhaust Silencer, Critical, Lean-Burn GLD Engine: 60 Hz kit: PA-354896; 50 Hz kit: PA-354894
- [ ] Exhaust Silencer, Critical, Rich-Burn GSID Engine: Kit: PA-354894
- [ ] Exhaust Silencer, Residential, Kit: PA-354892
- [x] Flexible Exhaust Connector, Stainless Steel

Cooling System

- [x] Block Heater
- [ ] Remote Radiator Cooling

Fuel System

- [x] Air/Fuel Ratio Controller
- [x] Gas Regulator
- [ ] Natural Gas Filter
- [x] Gas Solenoid Valve

Electrical System

- [x] Battery
- [x] Battery Charger, Equalize/Float Type
- [ ] Battery Heater
- [x] Battery Rack and Cables

Engine and Alternator

- [ ] Bus Bar Kits
- [ ] CSA Certification
- [x] Alternator Strip Heater
- [x] Line Circuit Breaker (NEMA1 enclosure) 100% rated
- [ ] Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)
- [x] Optional Alternators
- [ ] Pre-Lube Pumps
- [ ] Pre-Lube Pumps with Heaters
- [x] Rated Power Factor Testing
- [x] Remote Voltage Adjust Control
- [x] Spring Isolators

Maintenance and Literature

- [ ] General Maintenance Literature Kit
- [ ] Maintenance Kit (includes air, oil, and fuel filters)
- [ ] Overhaul Literature Kit
- [ ] Production Literature Kit

Controller

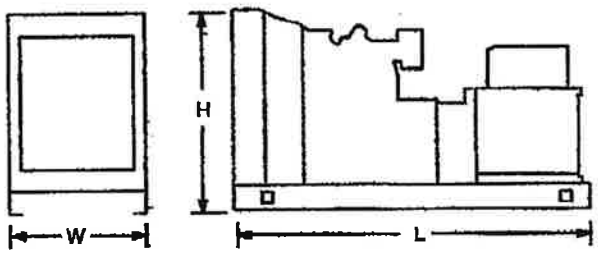
- [x] Common Failure Relay Kit
- [ ] Communications Products and PC Software
- [x] Customer Connection Kit
- [x] Dry Contact Kit (isolated alarm)
- [ ] Remote Annunciator Panel
- [ ] Remote Audiovisual Alarm Panel
- [ ] Remote Emergency Stop Kit
- [ ] Remote Mounting Cable
- [x] Run Relay Kit

Miscellaneous Accessories

- [x] Woodward governor
- [x] Marathon DM2000E
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):	4924 x 2416 x 3111 (193.8 x 95.1 x 122.5)
Weight (radiator model), wet, kg (lb.):	10750 (23700)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

Attachment 7

Blackstart Generator Engine Log

Black Start Internal Combustion Engine Monthly Operating Log

Site: ***McGrathBeach Peaker***
Facility ID: 7891
BHP: 924 HP
Device ID:

Model: Waukesha, Model VGF36 GL/GLD
Fuel Type Natural Gas

Permit Conditions:

Operator shall limit the operating time to no more than 200 hours in any one year.

Operator shall install and maintain non-resettable totalizing time meter to indicate elapsed operating time of engine.
The engine shall only be operated during utility failure periods (except for maintenance).

Emissions factor 1.25 grms NOx/BHP-hr

Date	Timer Reading (Start)	Timer Reading (End of run)	Total Hours Operated	Reason for Operation	Emergency Operation Hours	Maintenance and Testing Hours	Rolling Hours	Operator Initial
8/30/2019	85.5	86.0	0.5	Test run engine		0.5	86.0	VM
10/10/2019	86.0	87.2	1.2	Test run engine		1.2	87.2	VM
10/14/2019	87.2	87.9	0.7	Blackstart Islanding		0.7	87.9	VM

Total Emergency Use Hours (hours/year)	Total Maintenance and Testing Hours (hours/year)	Total Hours (hours/year)	NOx Emisisons (tons)
0.0	2.4	2.4	0.0031

Revised: 12/15/2014

Attachment 8

Pressure-vacuum relief valve calibration

Basin Valve Company

Breather Valve Service Report

Customer : Southern California Edison

PO No :

Site : Peaker Generating Stations

Rev : 6 Sales Order : 193912 Date Required : 5/8/2019

Location :

Repair Nameplate Data	By : CB	Original Nameplate Data	By : CB
SAP Number :	Pretest Date : 5/3/2019	Set Pressure : 0	Capacity : 0
Tag Number : .PSV-200-E	Job Number : D14	Set Vacuum : 3.5 IN WC	Capacity : 156.5
Manufacturer : Groth	Size : 2	Last Repair Nameplate Data	By : CB
Model No : 1300A-02-355-T0Z	Set Pressure : 0	Set Pressure : 0	Capacity : 0
Serial No : 121258-10-3	Capacity : 0	Set Vacuum : 3.5	Capacity : Unique ID : D14
Shop No :	Set Vacuum : 3.5	Repair Company : Basin Valve Company	
Interval : 0	Capacity : 156.5	Last Repair Date : 3/4/2015	
Units :	Press Units : In WC		
Inlet : 2 / 150 / RF	Outlet : / /	Field Location : MC GRATH	

Work Order :

Pre-Test Information By : HA

Pop PSIG : 0 New Valve : No Pop : 2 Fouled : Leaked At : 0.5

Conditions After Dismantling By : MR

Cleanliness Condition : Normal condition Mechanical Condition : Slight pitting scratched

Parts	Pretest Conditions	Work Performed	Note
Body	Good		
Vacuum Seat	Good	Lapped	
Pressure Seat			
Vacuum Pallet	Good		
Pressure Pallet			
Pressure Pallet Stem			
Pallet Guide	Good		
Diaphram Pressure			
Diaphram Vacuum		Replaced	
Backup Disc Pressure			
Backup Disc Vacuum			
Spacer Pressure			
Spacer Vacuum			
Flange	Good		
Gaskets		Replaced	
Loading Weights	Good		
Retaining Plat			
Vacuum Cover	Good		
Pressure Cover	Good		
Spring			
Spare 1			

Qty	PO Number	Part Number	Description
1			SGK

Special Instructions :

☐ O2 Cleaning Required ☐ Replace Next Shut Down

☐ Repair as Required ☑ Final Test Only ☐ Repair Return to SP ☐ PreTest Return to SP ☐ Change Set Pressure

☐ Replace Soft Goods ☐ Pull from SP ☐ Build From Spare Pool / Tag No

☑ Seals Intact ☐ Seals Broken ☐ Seals Missing

Valve Repair Note :

Assembled By : NJ **Mach/Lapp By : NJ** **Final Test Information** **Cleaned By : DR** **Inspected By : CB**

Test Specifications : Test Meduim : Air Test Type : Seat Code Stamp Applied :

Set Pressure : 0 Set Vacuum : 3.5

Gauges Used : Primary : WC Stand Secondary : WC Stand Hold Time :

Misc Items : ID Tag : ✔ Paint : ✔ Seals : ✔ Flange Protector

Final Test By : Noe Jimenez Sig : Final Test Date : 5/6/2019 Company : Basin Valve Company

QC Witnessed By : Jorge Martinez Sig : QC Date : 5/6/2019 Company :

VR Stamp Number/s : 20 Install Verified By : Date :

Basin Valve Company

Customer : Southern California Edison

Safety Valve Pre-Test Graph

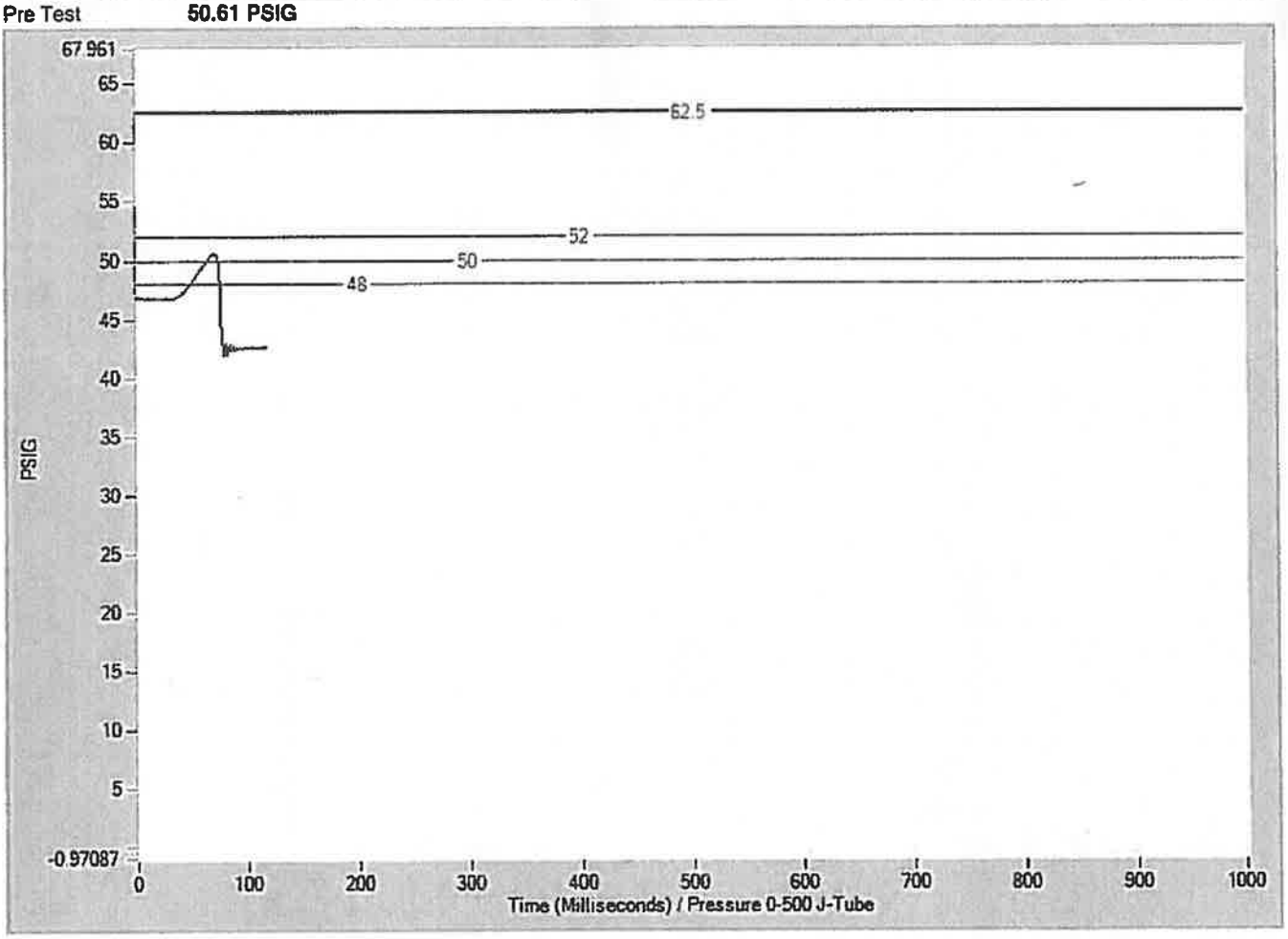
193912

Repair Nameplate Data	By :	Original Nameplate Data	By : JEO
Revision : 6	Test Date : 5/4/2019	Set Pressure : 50 Cold Set : 50	Back Press :
Tag Number : PSV-201-B-E	Job Number : D18	Capacity : 383 Units : GPM	Code Stamp : UV
Manufacturer : CROSBY	Orifice : K	Last Repair Nameplate Data	By :
Model No : JLT-JOS-E-15-OR-J	Set Pressure : 50	Set Pressure : 50 Cold Set : 50	Back Press :
Serial No : HS06/55272	Cold Set : 50	Capacity : 383 Units : GPM	Unique ID : 188076
Shop No : 82353544E	Back Press : 0	Repair Company : Basin Valve Company	
Interval : 0	Capacity : 383	Last Repair Date : 3/30/2018	VR : ☑
Units : GPM	Temp Corr : 0		
Inlet : 3 / 150 / RF	Outlet : 4 / 150 / RF		

Repair Note :

Set Pressure Definition : First Steady Stream

Pre Test 50.61 PSIG



Basin Valve Company

Safety Valve Service Report

Customer : Southern California Edison

PO No :

Site : Peaker Generating Stations

Rev : 6 | Sales Order : 193912 | Date Required : 5/8/2019 | Location :

Repair Nameplate Data By : JEO

SAP Number :	Pretest Date :
Tag Number : PSV-201-B-E	Job Number : D18
Manufacturer : CROSBY	Orifice : K
Model No : JLT-JOS-E-15-OR-J	Set Press : 50
Serial No : HS06/55272	Cold Set : 50
Shop No : 82353544E	Back Press : 0
Interval : 0	Capacity : 383
Units : GPM	Temp Corr : 0
Inlet : 3 / 150 / RF	Outlet : 4 / 150 / RF

Original Nameplate Data By : JEO

Set Pressure : 50	Cold Set : 50	Back Press :
Capacity : 383	% Over Pressure : 10	Units : GPM
Temp Corr :		Code Stamp : UV
Model Number : JLT-JOS-E-15-OR-J		Code Case :
Serial Number : HS06/55272		

Last Repair Nameplate Data By :

Set Pressure : 50	Cold Set : 50	Back Pressure :
Capacity : 383	Units : GPM	Unique ID : 188076
Repair Company : Basin Valve Company		
Last Repair Date : 3/30/2018		VR : ✔
Field Location :		

Work Order :

Pre-Test Information By : N/A

Pop PSIG : 50.61	New Valve :	No Pop :	Fouled :	Leaked At :

Probable Cause of Failure : Valve performed properly

Conditions After Dismantling By : N/A

Cleanliness Condition : All Parts Clean

Mechanical Condition : Passed pretest-No internal inspection made

Parts	Pretest Conditions	Work Performed	Note	Part No
Bonnet Assembly				
Spring				
Upper Spring Washer				
Lower Spring Washer				
Compression Screw				
Comperssion Jam Nut				
Body				
Inlet Flange				
Outlet flange				
Guide				
Disc				
Disc Holder				
Nozzle				
Spindle				
Overlap Adjustment				
Retaining Ring				
Floating Washer				
Spindle Nut				
Lock Nut				
Cap				
Top lever & Pin				
Lower Lever & Pin				
Upper Adj Ring & Pin				
Lower Adj Ring & Pin				
Bellows				
Gaskets				

Critical Dimensions

Disc :	Min / Max :		After Repair :	Material Left :
Disc Holder :	Min / Max :		After Repair :	Material Left :
Guide :	Min / Max :		After Repair :	Material Left :
Nozzle :	Min / Max :	4.654	After Repair :	Material Left :

Ring Adjustment / Spring Info

Upper Ring :	As Found :	After Repair :
Lower Ring :	As Found :	After Repair :
Compression Screw :	As Found :	After Repair :
Spindle / Stem :	As Found :	After Repair :
Spring Number : X36139		Spring Range : 39-50

Special Instructions :

Back Pressure Tested at PSIG 30 ☐ O2 Cleaning Required

Seat Leakage Tested at 90 % of Set Pressure

☐ Replace Next Shut Down

☐ Add Face Seal Conn

☐ Repair as Required

☑ Final Test Only

☐ Repair Return to SP

☐ PreTest Return to SP

☐ Change Set Pressure

☐ Replace Soft Goods

☐ Pull from SP

☐ Build From SP / Tag No

☑ Seals Intact

☐ Seals Broken

☐ Seals Missing

Cap / Lever

☐ Open

☐ Packed

☑ Screwed

Valve Repair Note :

Assembled By : N/A | Mach/Lapp By : N/A | **Final Test Information** | Cleaned By : N/A | Inspected By : N/A

Test Specifications :	Test Medium : Liquid	Test Type : Seat	Set Pressure Definition : First Steady Stream	Code Stamp Applied : None
Set Pressure : 50	Average Test : 50.61	Test 1 : 50.61	Test 2 : 50.61	Test 3 : 50.61
Gauges Used :	Primary : CPU	Secondary : D-2		Hold Time :
Misc Items :	ID Tag : ✔	Paint :	Seals : ✔	Flange Protector : ✔
Final Test By : Erick Delgadillo	Sig :	Final Test Date : 5/4/2019	Company : Basin Valve Company	
QC Witnessed By : Jorge Martinez	Sig :	QC Date : 5/4/2019	Company :	
VR Stamp Number/s : 20	Install Verified By :		Date :	

Attachment 9

Coating and Solvent usage log

COATING, ADHESIVE, and SOLVENT USAGE CHART

COMPANY NAME: So Cal Edison McGrath Peaker
ADDRESS: 251 N Harbor Blvd Oxnard CA 93035
TELEPHONE NUMBER: (805)-673-7228
PERIOD: FROM Janaunary THROUGH December 20 2019
Maintain daily logs and submit copies monthly to C.J Akunyili (chijioke.akunyili@sce.com). Call 909.478.1771 for assiatance.

PERMIT NUMBER: 7891
PREPARED BY (Print Name:) Chijioke Akunyili
SIGNATURE:
TITLE: Environmental Science Advisor

16 Fluid Oz = 1 Pint 4 Quarts = 1 Gallon 1lb = 454 g
2 Pints = 1 Quart 1 Gallon = 3.785 Liters 1 lb/gal = 1

COATING/AEROSOL/SOLVENT USAGE LOG

DATE	NAME, NUMBER, COLOR	COATING CATEGORY	MANUFACTURER	SIZE	QUANTITY USED	ROG CONTENT (lb/gal)	ROG (lb)	
	COATINGS							
6/3/2019	Amerlock AK-2 High Sold Epoxy	Industrial Maintenance/Rust Preventine Coating	PPG	GAL	0.25	0.7	0.175	
6/5/2019	Tri-Polar 6060 Light Gray ALKYD	Metal Parts and Product	PPG	GAL	1	2.7	2.7	
6/7/2019	K&L KOLOR-SIL ENAMEL SKY GRAY/KLF16792/05	Metal Parts and Product	PPG	GAL	1	2.7	2.7	Note: Rule 74.12 Surface Coating of Metal Parts, and Usage is less than 200 lbs/month threshold.
6/7/2019	K&L KOLOR-SIL ENAMEL SKY GRAY/KLF16792/05	Metal Parts and Product	PPG	GAL	1	2.7	2.7	
7/8/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/9/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/10/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	2	0.734	1.468	
7/11/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	2	0.734	1.468	
7/15/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	2	0.734	1.468	
7/16/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/17/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
7/17/2019	Cartbothane 134, twp components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	1.565	0.7825	
7/18/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/19/2019	Carbomastic 15, Alumnium (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/22/2019	Carbomastic 15, Alumnium (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/23/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	

7/24/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/25/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	0.734	0.734	
7/25/2019	Cartbothane 134, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	1	1.565	1.565	
7/29/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	5	1.8	9	
7/30/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	5	1.8	9	
7/30/2019	Cartbothane 134, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	1.565	0.7825	
7/31/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
7/31/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
8/1/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
8/1/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	10	1.8	18	
8/5/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
8/6/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	5	1.8	9	
8/6/2019	Cartbothane 134, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	2.5	1.565	3.9125	
8/7/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
8/8/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	20	1.8	36	
8/12/2019	Carbocrylic 3359 (grey)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	15	1.8	27	
8/13/2019	Carbomastic 15, two components (A+B)	Industrial Maintenance/Rust Preventine Coating	Carboline	GAL	0.5	0.734	0.367	
	SOLVENT							
01/01-12/31	Zok Jet Engine Cleaner	Jet Engine Cleaner	Zok International	GAL	55	0.08	4.4	
01/01-12/31	Simple Green Cleaner	Multipourpose surface cleaning		GAL	3	0.042	0.126	
06/03-06/07	Acetone	Thinning and Cleaning of coating application equipment		GAL	1			
01/01-12/31	S-34 NG Cleaner Nuclear Grade		Ecolink, Inc.	32 oz	3	0.21	0.157248	
	AEROSOL SPRAY							
01/01-12/31	CO Contact Cleaner Aerosol		CRC Insustries	14 oz	5	7.49	4.08954	
01/01-12/31	WD-40 Aerosol		WD-40 Company	14 oz	4	1.7	0.74256	
01/01-12/31	Cold Galvanized Corrosion Inhibitor		LPS	14 oz	1	3.07	0.335244	
01/01-12/31	D-5480NS, Graphite Dry Lubricant		LPS	14 oz	1	3.07	0.335244	
01/01-12/31	Cold Galvanized Corrosion Inhibitor		LPS	14 oz	1	3.07	0.335244	
01/01-12/31	3M Multipurpose Adhesive		3M	16 oz	1	3.07	0.383136	
Total VOC Emissions (Pounds)							147.800716	

Attachment 10

2019 Opacity Survey

TEST REPORT FOR
2019 PERMIT TO OPERATE COMPLIANCE TEST AT SOUTHERN CALIFORNIA EDISON'S MCGRATH PEAKER FACILITY

Prepared For:

Southern California Edison
251 N. Harbor Blvd.
Oxnard, California

For Submittal To:

Ventura County Air Pollution Control District
669 County Square Drive
Ventura, California 93003

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 282-8240

Ali Aleshaiker

Test Date: **July 8, 2019**
Production Date: **August 8, 2019**
Report Number: **W002AS-580464-RT-93**

STAC

ACCREDITED
TO ASTM D7036 ONLY
CERT #3925.01

MONTROSE
AIR QUALITY SERVICES

CONFIDENTIALITY STATEMENT

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REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature: _____ Date: 8/8/2019

Name: Ali Aleshaiker Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature: _____ Date: 8/8/2019

Name: Matt McCune Title: Regional Vice President

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3.6 VISUAL EMISSIONS

Ali Aleshaiker of MAQS, a CARB certified visible emission evaluator (most recent re-certification performed 1/25/19), conducted the annual Rule 50 Opacity survey of the station's Gas Turbine LM6000 exhaust using EPA Method 9. During each observation, three 6-minute visual opacity measurements were obtained. The results show that no emissions were visible from the source at the time of the observations. The raw data sheets are provided in Appendix A.5.

According to the facility representative the 924 Waukesha VGF L36GLD Black Start Generator IC Engine was out of service and could not be operated for visible emissions evaluation.

Appendix A.5
Visual Emissions Data

MONTROSE AIR

VISIBLE EMISSION OBSERVATION DATA SHEET

MONTROSE

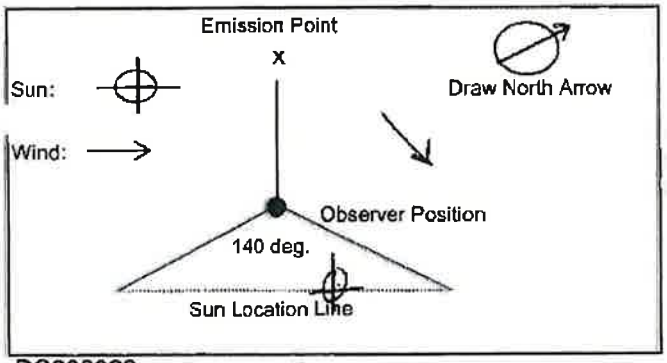
Facility Name:	SCE McGrath
Street Address	251 North Harbor Blvd.
City: Oxnard	State: CA Zip: 93035
Phone: NA	

Process Equipment: Turbine	Operating Mode: Online
Control Equipment: CO Catalyst	Operating Mode: Online

Describe Emission Point: Stack Exit	
Ht. Above Ground Level: ~100	Ht. Rel. to Observer: ~100
Dist. from Observer: ~300'	Dir. from Observer: NW

Describe Emissions Start:	None	End:	None
Emission Color: Start:	NA	End:	NA
Water Plume Present?	None		
Point in the Plume at which Opacity was Determined: Stack Exit			

Describe Plume Background:	Sky		
Background Color: Start:	White	End:	White
Sky Conditions: Start:	Cloudy	End:	Cloudy
Wind Speed: Start:	<5MPH	End:	<5MPH
Wind Direction: Start:	E	End:	E
Ambient Temperature: Start:	65°F	End:	65°F



Observation Date:	Start Time	End Time:
7/8/19	925	945

	Seconds			
Minute	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	-	-	-	-
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	-	-	-	-
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
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40				

Observers Name:	Ali Mashaiker
Observers Signature:	Date: 7/8/19
Company Name: Montrose Air Quality Services	
Certified By: Cal. Air Resources Board	Date: 1/25/19