SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

February 9, 2021

Mr. Keith Macias
Manager, Compliance Division
Ventura County Air Quality Management 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 (SCE) is submitting the Part 70 Permit Annual Compliance Certification for McGrath Peaker Generating Station, Permit #07891, for the period between January 1, 2020 and December 31, 2020.

During the subject period, McGrath experienced permit deviations for exceedances of the Reactive Organic Compound (ROC) emission limit during source testing of the gas turbine on June 23, 2020 and July 9, 2020. As you are aware, this incident has already been discussed at length with the District. A Notice of Violation (NOV# 24316) was issued to the facility on July 9, 2020 for these exceedances. After further investigation the cause of the ROC exceedances was found to be contaminated sampling equipment (Tedlar bags) from the source test vendor, and the facility passed a subsequent re-test on July 20, 2020 using stainless steel canisters in lieu of Tedlar bags. Upon receiving the source test reports and letter of explanation from SCE detailing the cause of the exceedances, the District elected to take no further action. A Deviation Summary Form for this incident is included with this report.

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

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

Sincerely,

DocuSigned by:
Dan Golden
8CDDD88E198D4CA...

Dan Golden
Principal Manager
Generation, Western Operations

Enclosures

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

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: DocuSigned by: Dan Golden 8CDDD88E198D4CA... | Date: |
| Title: Principal Manager, Generation | 2/11/2021 |

Time Period Covered by Compliance Certification

01/ 01/20 (MM/DD/YY) to 12/31/20 (MM/DD/YY)

Ventura County
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# ANNUAL COMPLIANCE CERTIFICATION

## SOURCE TEST SUMMARY FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| 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: |
| 2.28 ppm @15% O2<br>3.82 lbs/hr | 2.5 ppm @ 15%O2<br>50 lbs/hr | 07891-T1-161, Condition 1a | 6/23/20 |

| 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: |
| 2.17 ppm @15% O2<br>1.26 lbs/hr | 2.0 ppm @ 15%O2<br>1.38 lbs/hr | 07891-T1-161, Condition 1b | 6/23/20 |

| 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: |
| 4.15 ppm @15% O2<br>4.23 lbs/hr | 6.0 ppm @ 15%O2<br>15.80 lbs/hr | 07891-T1-161, Condition 1c | 6/23/20 |

| 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: |
| 2.76 ppm @15% O2<br>1.71 lbs/hr | 5.0 ppm @ 15%O2<br>3.44 lbs/hr | 07891-T1-161, Condition 1d | 6/23/20 |

| 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: |
| | | | |

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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: |
| 2.03 ppm @15% O2<br>3.37 lbs/hr | 2.5 ppm @ 15%O2<br>50 lbs/hr | 07891-T1-161, Condition 1a | 7/9/20 |

| 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: |
| 11.90 ppm @15% O2<br>6.89 lbs/hr | 2.0 ppm @ 15%O2<br>1.38 lbs/hr | 07891-T1-161, Condition 1b | 7/9/20 |

| 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: |
| 3.12 ppm @15% O2<br>3.16 lbs/hr | 6.0 ppm @ 15%O2<br>15.80 lbs/hr | 07891-T1-161, Condition 1c | 7/9/20 |

| 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: |
| 3.14 ppm @15% O2<br>1.93 lbs/hr | 5.0 ppm @ 15%O2<br>3.44 lbs/hr | 07891-T1-161, Condition 1d | 7/9/20 |

| 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: |
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## SOURCE TEST SUMMARY FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| 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: |
| 2.03 ppm @15% O2<br>3.35 lbs/hr | 2.5 ppm @ 15%O2<br>50 lbs/hr | 07891-T1-161, Condition 1a | 7/20/20 |

| 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: |
| <0.38 ppm @15% O2<br><0.22 lbs/hr | 2.0 ppm @ 15%O2<br>1.38 lbs/hr | 07891-T1-161, Condition 1b | 7/20/20 |

| 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: |
| 3.43 ppm @15% O2<br>3.46 lbs/hr | 6.0 ppm @ 15%O2<br>15.80 lbs/hr | 07891-T1-161, Condition 1c | 7/20/20 |

| 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: |
| 3.01 ppm @15% O2<br>1.84 lbs/hr | 5.0 ppm @ 15%O2<br>3.44 lbs/hr | 07891-T1-161, Condition 1d | 7/20/20 |

| 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: |
| | | | |

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# ANNUAL COMPLIANCE CERTIFICATION
## DEVIATION SUMMARY FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| A. Attachment # or Permit Condition #: | B. Equipment description: | C. Deviation Period: Date & Time |
|---|---|---|
| 7891-T1-161<br>Condition 1B | GE LM-6000 PC SPRINT Gas Turbine | Begin: 6/23/20, 11:14 AM<br>End: 7/20/20, 5:30 PM<br>When Discovered: Date & Time<br>7/7/20 9:36 AM |
| D. Parameters monitored: | E. Limit: | F. Actual: |
| Reactive Organic Compounds (ROC) | 2.0 ppmvd @ 15%O2 | 2.17 ppmvd @ 15%O2 on 6/23, 11.90 ppmvd @ 15%O2 on 7/9 |
| G. Probable Cause of Deviation: | H. Corrective actions taken: | |
| The failed ROC source tests on 6/23 and 7/9 were due to contaminated sampling equipment (Tedlar bags). | SCE worked with the source test vendor and VCAPCD to investigate the cause of the high ROC readings and re-tested the unit multiple times. Ambient air sampling eventually confirmed Tedlar bag contamination as the cause. Unit succesfully passed a re-test on 7/20 using stainless steel canisters in lieu of Tedlar bags. | |

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

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# ANNUAL COMPLIANCE CERTIFICATION
## PERMIT ATTACHMENT FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| A. Attachment # or Permit Condition #: 7891-T1-161 Conditions # 1-5 | D. Frequency of monitoring: Annual Source Test and Continuous Emissions Monitoring |
| B. Description:<br>Gas Turbine Emissions Limits:<br>- NOx emissions shall not exceed 2.5 ppmvd @ 15% O2<br>- NOx emissions shall not exceed 25 ppm @ 15% O2 (4-hr rolling avg)<br>- ROC emissions shall not exceed 2.0 ppmvd @ 15% O2<br>- CO emissions shall not exceed 6.0 ppmvd @ 15% O2<br>- NH3 emissions shall not exceed 5.0 ppmvd @ 15% O2 | E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable<br>Source Test Summary Form attached. |
| C. Method of monitoring:<br>Continuous Emissions Monitoring. Source testing performed on 6/23/20, 7/9/20, and 7/20/20. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): I<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): Y<br>*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:<br>Continuous Emissions Monitor - Permittee shall:<br>-Install, Operate, Maintain, and Calibrate CEMS pursuant to Rule 74.23; Rule 103, NSPS KKKK and 40 CFR 75.<br>-Promptly report emission violations as indicated by the CEMS<br>-Maintain permanent CEMS records.<br>-Maintain records of all maintenance activities | E. Source test reference method, if applicable. Attach Source Test Summary Form, if applicable<br>N/A |
| C. Method of monitoring:<br>Attachment #1: CEMS emissions and natural gas usage records.<br>Attachment #2: CEMS maintenance record.<br>Attachment #3: CEMS calibrations record.<br>Attachment #4: SCR and CO catalyst temperature and pressure devices calibrations records.<br>Attachment #5: Fuel and Ammonia flow-meters calibrations records. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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:<br>Permittee shall submit operating records pursuant to Rule 74.23.E of:<br>-Actual fuel consumption or operating hour records for the past 12 months;<br>-Annual source test and control system operating parameters<br>Permittee shall submit excess emissions and monitoring 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<br>Source Test Summary Form attached |
| C. Method of monitoring:<br>An in-line fuel flow meter is used to monitor actual fuel consumption.<br>Attachment #1 is rolling twelve months total gas consumption.<br>Compliance source tests were performed on 6/23/20, 7/9/20, and 7/20/20. Test reports have been submitted to the District.<br>Excess emissions and monitoring systems reports have been submitted to the District | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

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Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

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Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| 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 1.8 hours in 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 1.8 hours in 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 215.58 mmscf of natural gas was combusted in the gas turbine in 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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.<br><br>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 2020, which indicates 1.16 tons of NOx were emitted from the gas turbine. Attachment 7 indicates 0.0023 tons of NOx was emitted from the black-start generator engine. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 1.8 hours in 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

| | |
|---|---|
| A. Attachment # or Permit Condition #: PO07891-111 Condition 6 | D. Frequency of monitoring: N/A |
| B. Description: Exempted 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 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 units at the facility comply with applicable sections of Rule 50. Attachment #10 is a copy of the 2020 opacity survey for the gas turbine and Black-start Generator performed on 6/23/20. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

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Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| 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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 24,650 cu.ft of gravel in 2020 for landscaping purposes. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

Ventura County
Air Pollution
Control District

# ANNUAL COMPLIANCE CERTIFICATION
## PERMIT ATTACHMENT FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| 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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 was 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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

Ventura County
Air Pollution
Control District

# ANNUAL COMPLIANCE CERTIFICATION
## PERMIT ATTACHMENT FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| 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<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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: Architectural coating operation was not performed at McGrath Peaker in 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*If yes, attach Deviation Summary Form |

Ventura County
Air Pollution
Control District

# ANNUAL COMPLIANCE CERTIFICATION
## PERMIT ATTACHMENT FORM

Period Covered by Compliance Certification: 01 / 01 / 20 (MM/DD/YY) to 12 / 31 / 20 (MM/DD/YY)

| | |
|---|---|
| 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 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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 2020. | F. Currently in Compliance? (Y or N): Y<br>G. Compliance Status? (C or I ): C<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): N<br>*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): _____<br>G. Compliance Status? (C or I ): _____<br>H. *Excursions, exceedances, or other non-compliance? (Y or N): _____<br>*If yes, attach Deviation Summary Form |

# Attachment 1 – Emissions and Natural Gas Fuel Record

Monthly Emissions - Averages & Totals Report
Southern California Edison - McGrath Beach Substation
251 N. Harbor Blvd., Oxnard, Ca 93035
Report Period 1/1/2020 00:00 to 12/31/2020 23:59
Generated: 2/7/2021

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 2020 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0.000 | 0.0 |
| Feb 2020 | 32.77 | 130.88 | 180.28 | 153 | 39 | 9 | 14.501 | 1585.5 |
| Mar 2020 | 54.43 | 236.23 | 289.42 | 243 | 62 | 14 | 22.997 | 2485.0 |
| Apr 2020 | 40.58 | 175.16 | 208.75 | 182 | 46 | 10 | 17.203 | 1863.7 |
| May 2020 | 96.08 | 382.00 | 501.24 | 449 | 115 | 26 | 42.547 | 4578.2 |
| Jun 2020 | 74.92 | 395.46 | 366.74 | 340 | 87 | 19 | 32.172 | 3428.4 |
| Jul 2020 | 37.08 | 167.49 | 147.42 | 172 | 44 | 10 | 16.332 | 1754.8 |
| Aug 2020 | 65.73 | 289.59 | 267.16 | 302 | 77 | 17 | 28.614 | 3073.6 |
| Sep 2020 | 47.88 | 233.18 | 228.27 | 215 | 55 | 12 | 20.353 | 2186.2 |
| Oct 2020 | 31.43 | 171.93 | 155.49 | 137 | 35 | 8 | 12.960 | 1388.9 |
| Nov 2020 | 13.17 | 82.73 | 67.78 | 58 | 15 | 3 | 5.528 | 590.4 |
| Dec 2020 | 5.93 | 50.25 | 35.20 | 25 | 6 | 1 | 2.374 | 252.2 |
| **Total Values** | **500.00 Hrs** | **2314.90 Lbs** | **2447.75 Lbs** | **2276.00 Lbs** | **581.00 Lbs** | **129.00 Lbs** | **215.58 MMcft** | **23186.90 MW.** |
| | | 1.16 **Tons** | 1.22 **Tons** | 1.14 **Tons** | 0.29 **Tons** | 0.06 **Tons** | | |

Monthly Emissions - Averages & Totals Report
Southern California Edison - McGrath Beach Substation
251 N. Harbor Blvd., Oxnard, Ca 93035
Report Period 1/1/2020 00:00 to 12/31/2020 23:59
Generated: 2/7/2021

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 2020 | 1905 | 2036 | 1933 | 494 | 110 | 183.015 |
| Feb 2020 | 1834 | 2034 | 1910 | 488 | 109 | 180.869 |
| Mar 2020 | 1850 | 2113 | 1946 | 498 | 111 | 184.324 |
| Apr 2020 | 1867 | 2201 | 2008 | 513 | 114 | 190.127 |
| May 2020 | 2238 | 2694 | 2452 | 627 | 139 | 232.233 |
| Jun 2020 | 2579 | 3008 | 2728 | 698 | 155 | 258.354 |
| Jul 2020 | 2551 | 2929 | 2673 | 683 | 152 | 253.112 |
| Aug 2020 | 2644 | 2986 | 2759 | 705 | 157 | 261.283 |
| Sep 2020 | 2800 | 3129 | 2887 | 738 | 164 | 273.395 |
| Oct 2020 | 2710 | 2979 | 2752 | 704 | 156 | 260.563 |
| Nov 2020 | 2335 | 2487 | 2312 | 591 | 131 | 218.940 |
| Dec 2020 | 2326 | 2461 | 2277 | 582 | 129 | 215.580 |
| **Final Values** | **2326 L** | **2461 L** | **2277 L** | **582 L** | **129 L** | **215.580 L** |

# Attachment 2 – CEMS Maintenance Record

**McGrath Peaker Generating Station**
**Quality Assurance Checks**
**Monthly Preventive Maintenance**

**MONTHLY QA/QC INSPECTIONS**

| Parameters to Check | | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | 1/28/2020 | 2/27/2020 | 3/25/2020 | 4/16/2020 | 5/27/2020 | 6/24/2020 | 7/22/2020 | 8/27/2020 | 9/23/2020 | 10/27/2020 | 11/19/2020 | 12/29/2020 |
| Technician's Initial: | | JW | JW | JW | JW | JW | JW | JW | JW | JW | JW | JW | JW |
| Unit ID Number | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Sample System Checks** | | | | | | | | | | | | | |
| Check NOx analyzer dessicant media. Replace as necessary | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Check filter on shelter HVAC system. Clean or replace as needed. | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Plan for the upcoming linearity/CGA. Check gas bottles pressures >500 psig. Also check expiration dates. Other new gas botles as needed keeping in mind the lead time may be several weeks. | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Check incoming instrument air filter | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **NOx Analyzer** | | | | | | | | | | | | | |
| Motherboard - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Interface - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| PMT Voltage | | -676.4 | -676.4 | -676.4 | -676.0 | -676.4 | -676.4 | -676.4 | -676.4 | -676.4 | -676.4 | -676.0 | -676.4 |
| I/O Board - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Temperatures:** | **Set Point/Range** | | | | | | | | | | | | |
| Internal | 15.0 to 45.0 deg C | 36.4 | 36.7 | 36.1 | 35.1 | 35.0 | 36.7 | 35.7 | 36.4 | 36.6 | 35.8 | 36.1 | 36.8 |
| Chamber | 48.0 to 52.0 deg C | 50.3 | 50.2 | 50.2 | 50.3 | 50.1 | 50.3 | 50.2 | 50.3 | 50.0 | 50.3 | 50.3 | 49.9 |
| Cooler | *-10 to -1.0 deg C | -2.7 | -2.8 | -2.7 | -2.8 | -2.9 | -2.8 | -2.7 | -2.8 | -3.0 | -2.9 | -2.7 | -2.9 |
| NOx Converter | 615.0.0 to 650 deg C | 622.4 | 626.6 | 622.7 | 620.3 | 621.1 | 627.1 | 621.4 | 622.4 | 625.6 | 620.1 | 620.3 | 626.6 |
| ***Other:*** | ***Set Point/Range*** | | | | | | | | | | | | |
| Chamber Pressure | 100.0 to 200.0 mmHG | 152.9 | 152.3 | 152.8 | 150.8 | 151.1 | 165.9 | 164.8 | 163.3 | 164.8 | 164.5 | 165.1 | 165.4 |
| 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 | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Interface - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Bias Supply Voltage | -130V to -100V | -110.8 | -110.8 | -110.7 | -110.7 | -109.7 | -110.8 | -110.8 | -110.8 | -110.8 | -110.8 | -110.8 | -110.8 |
| I/O Board - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Temperatures:** | **Set Point/Range** | | | | | | | | | | | | |
| Internal | 8.0 to 47.0 deg C | 32.9 | 34.2 | 33.5 | 33.3 | 33.1 | 34.4 | 33.0 | 35.5 | 33.3 | 33.3 | 34.0 | 33.8 |
| Bench | 40.0 to 59.0 deg C | 47.9 | 48.2 | 47.7 | 48.5 | 48.3 | 48.2 | 48.0 | 47.9 | 48.4 | 48.1 | 48.1 | 48.0 |
| ***Other:*** | ***Set Point/Range*** | | | | | | | | | | | | |
| Analyzer Pressure | 250.0 to 1000.0 mmHG | 750.6 | 747.9 | 751.2 | 748.7 | 747.0 | 745.5 | 748.1 | 742.9 | 747.9 | 749.1 | 752.1 | 750.6 |
| Sample Flow Rate | 0.35 to 1.5 LPM | 0.980 | 0.972 | 0.973 | 0.967 | 0.963 | 0.964 | 0.979 | 0.974 | 0.976 | 0.977 | 0.966 | 0.971 |
| Sample Ratio | | 1.1735500 | 1.1731200 | 1.1729500 | 1.1727400 | 1.1725200 | 1.1721600 | 1.1718300 | 1.1720000 | 1.1723500 | 1.1721300 | 1.1722500 | 1.1726100 |
| AGC Intensity | 150KHZ to 300KHZ | 198941 | 198452 | 199050 | 198628 | 198670 | 198277 | 198574 | 198608 | 198347 | 198730 | 198607 | 198666 |
| 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 |
| **NOxNH3 Analyzer** | | | | | | | | | | | | | |
| Motherboard - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Interface Board - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| PMT Voltage | | -601.3 | -601.3 | -600.9 | -601.3 | -600.9 | -601.3 | -601.3 | -601.3 | -600.9 | -657.5 | -657.9 | -657.5 |
| I/O Board - Voltages - Check status and ensure normal operation | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Temperatures:** | **Set Point/Range** | | | | | | | | | | | | |
| Internal | 15.0 to 45.0 deg C | 33.1 | 34.7 | 34.2 | 34.0 | 33.8 | 34.4 | 33.7 | 34.2 | 33.8 | 34.5 | 34.9 | 34.6 |
| Chamber | 48.0 to 52.0 deg C | 50.1 | 49.9 | 50.0 | 49.9 | 50.3 | 49.9 | 49.9 | 50.1 | 50.4 | 49.9 | 50.0 | 49.8 |
| Cooler | *-10 to -1.0 deg C | -2.7 | -3.1 | -3.0 | -2.8 | -3.1 | -3.0 | -2.6 | -3.0 | -3.0 | -2.6 | -3.0 | -3.0 |
| NOx Converter | 615.0.0 to 650 deg C | 625.6 | 623.7 | 624.8 | 624.8 | 621.9 | 623.5 | 621.4 | 621.6 | 622.7 | 626.6 | 624.8 | 626.9 |
| ***Other:*** | ***Set Point/Range*** | | | | | | | | | | | | |
| Chamber Pressure | 100.0 to 200.0 mmHG | 170.3 | 170.0 | 170.6 | 169.1 | 169.1 | 164.9 | 164.4 | 163.5 | 164.1 | 168.8 | 168.2 | 168.8 |
| 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 "Y", 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:** _____

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Quarterly Preventive Maintenance

| QUARTERLY QA/QC INSPECTIONS | | | | | |
|---|---|---|---|---|---|
| | | First Quarter | Scond Quarter | Third Quarter | Fourth Quarter |
| | Date | 3/25/2020 | 6/24/2020 | 9/24/2020 | 12/29/2020 |
| | Techecian's Initial: | JW | JW | JW | JW |
| **Parameters to Check** | | | | | |
| **SAMPLE SYSTEMS CHECK:** | | | | | |
| Inspect sample gas pressure. If sample gas pressure shows a decline, peform one or more of the following: | | Y | Y | Y | Y |
| | Perform probe manintenance | Y | Y | Y | Y |
| | Relace filter element and clean the filter chamber | N | N | N | N |
| | Verify if proble box heater is operating | Y | Y | Y | Y |
| | If flow is low check sample pump | N | N | N | N |
| | Perform CEMS sample system leak check | N | N | N | N |
| | Perform general housekeeping duties. Dust/clean all equipment surfaces. | Y | Y | Y | Y |
| **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 | Y | Y | Y | Y |
| | Clean inside of each instrument by vacuuming | Y | Y | Y | Y |
| | Clean all analyzer cooling fans | Y | Y | Y | Y |
| | Caution: Observe all safety warning from manufactuers manual | Y | Y | Y | Y |
| | | | | | |
| | | | | | |

**REMARKS:** _____

Mark as either **Acceptable "Y", 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:** _____

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Annual Preventive Maintenance

**ANNUAL QA/QC INSPECTIONS**

| | |
|---|---|
| Date | 6/2/2020 |
| Techecian's Initial: | JW |

| Parameters to Check | | *Values/Status* |
|---|---|---|
| **TECO MODEL 421i-LS NOx** | | |
| | Clean the lens in the reaction chamber s needed | Not Needed |
| | Perform a NOx converter check. Replace the converter as necessary | N/A |
| | Inspect and Clean cooler fins on PMT cooler | Checked |
| | Check sample pump A - Replace diaphram and disk as needed | Replaced |
| | Check sample pump B - Replace diaphram and disk as needed | N/A |
| | Replace capillaries and O-rings | Inspected |
| **SERVOMEX MODEL 1440D O2 Analyzer** | | |
| | Check filter element at Flow Control Device, replace as needed | Replaced |
| | Check for leaks | Checked |
| **TECO MODEL 48I CO Analyzer** | | |
| | Replace IR Source (as needed) | Replaced |
| | Clean correlation wheel, optics, and measuring cell, as necessary | Cleaned |
| | Check for leaks around fittings | Checked |
| | Check pump diaphram and replace as necessary | Replaced |
| | Replace capillary | Inspected |
| | Clean fan filter | Cleaned |
| **Sample System Checks** | | |
| | Check sample pump A tubing - Replace diaphram and disk as needed | Replaced |
| | Check sample pump B tubing - Replace diaphram and disk as needed | Replaced |
| | Perform probe maintenance, inspect filter and O-rings and replace as necessary | Replaced |
| | Adjust 4-20 mA outputs (analog) tomatch LED display for all analyzers | Verified |
| | Replace ammonia scrubber media | Replaced |
| | Replace peristaltic pump diaphram | Replaced |
| | Replace dry air dessicant | Replaced |

**REMARKS:**

Mark as either **Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | | | 1/2/2020 | | | |
| Technician's Initial | | | | | | JW | | | |
| 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 | | | | 1290 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | | | 1020 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | | | 910 | | | |
| **Stack Sample Line** | Please enter readings | | | | | | | | |
| Sample Line Temperature | TC1 | 250ºF | | | | 250 | | | |
| Sample NH3 Temperature - | TC2 | 760ºF | | | | 760 | | | |
| Sample Line Pressure/Vacuum | PI-1 | 6.0 "Hg | | | | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | | | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | | | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | | | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | | | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | | | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | | | 67.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | | | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | | | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | | | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | | | Y | | | |
| **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 | | | | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | | | | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | | | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | | | 1.55 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | | | | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | | | 4.5 | | | |
| NOX/NH3 Analyzer | FM-8 | 1.5 LPM | | | | 1.45 | | | |
| NOX/NH3 Analyzer By-Pass | FM-9 | 1.2 - 1.5 LPM | | | | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | | | 600 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Check Alarms in DAHS. | | | | | | Y | | | |
| Check chart recorder for normal operation | | | | | | Y | | | |
| Check printer status | | | | | | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 1/6/20 | 1/7/20 | 1/8/20 | 1/9/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1220 | 1200 | 1140 | 1090 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 960 | 950 | 890 | 870 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 910 | 900 | 880 | 860 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.7 | 5.7 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.6 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.2 | 6.1 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 70.0 | 67.5 | 67.0 | 67.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 7.3 | | | |
| 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 | 1.3 | 1.3 | 1.3 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.7 | 1.65 | 1.7 | 1.7 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | | | | | | |
| 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 | 590 | 590 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 1/13/20 | 1/14/20 | 1/15/20 | 1/16/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1000 | 990 | 930 | 900 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 870 | 870 | 870 | 820 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 860 | 860 | 830 | 800 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.6 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.7 | 5.6 | 5.6 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.6 | 6.5 | | | |
| 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) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 67.5 | 69.5 | 69.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 1.35 | 1.35 | 1.3 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | 1.7 | 1.65 | 1.55 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 590 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | | 1/21/20 | 1/22/20 | 1/23/20 | | | |
| Technician's Initial | | | | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | 790 | 770 | 770 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | 770 | 770 | 800 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | 790 | 790 | 790 | | | |
| Stack Sample Line | | | | | | | | | |
| 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 | | 6.4 | 6.3 | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | 5.8 | 5.8 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | 6.5 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | 6.1 | 6.1 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Visual Checks | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | 68.0 | 67.0 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | Y | Y | Y | | | |
| 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 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | 1.35 | 1.35 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | 1.7 | 1.65 | 1.7 | | | |
| 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 | | | |
| 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 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | 580 | 580 | 580 | | | |
| DAHS Checks | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | | Y | Y | Y | | | |
| Check printer status | | | | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

REMARKS:

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 1/27/20 | 1/28/20 | 1/29/20 | 1/30/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 700 | 690 | 620 | 630 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 790 | 760 | 720 | 700 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 790 | 790 | 730 | 740 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.6 | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.7 | 5.7 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.1 | 6.1 | 6.0 | 6.1 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 67.5 | 69.0 | 69.0 | 69.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.65 | 1.55 | 1.55 | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.7 | 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 | 1.7 | 1.7 | 1.65 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 660 | 660 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | **2/3/20** | | **2/5/20** | **2/6/20** | | | |
| Technician's Initial | | | JW | | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 580 | | 570 | 520 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 720 | | 720 | 700 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 710 | | 750 | 690 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | | 6.5 | 6.3 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | | 5.8 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | | 5.8 | 5.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | | 6.1 | 6.1 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 66.5 | | 69.5 | 67.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | | | Please enter readings | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.1 | | 4.3 | 4.1 | | | |
| 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 | | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.35 | | 1.35 | 1.3 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | | 1.65 | 1.65 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.5 | | 4.5 | 4.5 | | | |
| 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 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 660 | | 660 | 660 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | | Y | Y | | | |
| Check printer status | | | Y | | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 2/10/20 | | | 2/13/20 | | | |
| Technician's Initial | | | JW | | | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 490 | | | 460 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 650 | | | 660 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 690 | | | 670 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | | | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.6 | | | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 5.7 | | | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | | | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | | | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | | | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | | | 68.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | | | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | | | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | | | Y | | | |
| **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 | | | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | | | 1.65 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | | | N/A | | | |
| 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 | 660 | | | 610 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| Check Alarms in DAHS. | | | Y | | | Y | | | |
| Check chart recorder for normal operation | | | Y | | | Y | | | |
| Check printer status | | | Y | | | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | | | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | **2/18/20** | **2/19/20** | **2/20/20** | | | |
| Technician's Initial | | | | **JW** | **JW** | **JW** | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | 370 | 350 | 2100 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | 600 | 600 | 620 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | 630 | 630 | 600 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | | 6.4 | 6.4 | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | 5.7 | 5.8 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | 6.5 | 6.6 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | 6.0 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | 68.5 | 67.0 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | Y | Y | Y | | | |
| **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 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | 1.35 | 1.35 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | 1.6 | 1.6 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | 4.5 | 4.5 | 4.5 | | | |
| 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 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | 600 | 600 | 600 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | | Y | Y | Y | | | |
| Check printer status | | | | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 2/24/20 | 2/25/20 | 2/26/20 | 2/27/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1670 | 1770 | 1780 | 1600 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 580 | 590 | 560 | 480 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 570 | 590 | 550 | 510 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.1 | 6.1 | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.8 | 5.9 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.1 | 6.2 | 6.2 | 6.1 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 67.5 | 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 | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.3 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.65 | 1.65 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 590 | 590 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 3/2/20 | 3/3/20 | 3/4/20 | 3/5/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1540 | 1510 | 1500 | 1460 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 430 | 350 | 320 | 1760 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 430 | 400 | 380 | 2000 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.2 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.8 | 5.8 | 5.9 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.0 | 6.0 | 6.1 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 67.5 | 68.5 | 69.5 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.3 | 1.35 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | 1.6 | 1.6 | 1.7 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 590 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 3/9/20 | 3/10/20 | 3/11/20 | 3/12/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1320 | 1360 | 1300 | 1300 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1580 | 1580 | 1550 | 1530 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1850 | 1930 | 1860 | 1830 | | | |
| **Stack Sample Line** | | | | | | | | | |
| Sample Line Temperature | TC1 | 250ºF | 250 | 250 | 250 | 250 | | | |
| Sample NH3 Temperature - | TC2 | 760ºF | 760 | 760 | 760 | 760 | | | |
| Sample Line Pressure/Vacuum | PI-1 | 6.0 "Hg | 6.9 | 6.5 | 7.4 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.5 | 5.7 | 5.2 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.8 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.9 | 6.0 | 5.9 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 69.5 | 69.5 | 68.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.1 | 4.3 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.55 | 1.5 | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.6 | 1.6 | 1.55 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.35 | 1.35 | 1.3 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | 1.65 | 1.55 | 1.65 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.5 | 4.5 | 4.2 | 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 | 580 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 3/9/20 | 3/10/20 | 3/11/20 | 3/12/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1320 | 1360 | 1300 | 1300 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1580 | 1580 | 1550 | 1530 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1850 | 1930 | 1860 | 1830 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 7.4 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.5 | 5.7 | 5.2 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.8 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.9 | 6.0 | 5.9 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 69.5 | 69.5 | 68.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.1 | 4.3 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.55 | 1.5 | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.6 | 1.6 | 1.55 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.35 | 1.35 | 1.3 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | 1.65 | 1.55 | 1.65 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.5 | 4.5 | 4.2 | 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 | 580 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 3/16/20 | 3/17/20 | 3/18/20 | 3/19/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1240 | 1260 | 1300 | 1270 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1470 | 1470 | 1490 | 1410 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1760 | 1780 | 1810 | 1790 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 6.7 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.8 | 5.6 | 5.8 | | | |
| 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 | 6.0 | 5.9 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 68.0 | 69.5 | 68.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.6 | 1.7 | 1.65 | 1.7 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 580 | 580 | 570 | 560 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms In DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | 3/23/20 | 3/24/20 | 3/25/20 | 3/26/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1230 | 1210 | 1190 | 1180 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1410 | 1380 | 1340 | 1260 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1770 | 1740 | 1700 | 1670 | | | |
| Stack Sample Line | | | | | | | | | |
| 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 | 6.5 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.8 | 5.8 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.1 | 6.1 | 6.1 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Visual Checks | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 67.5 | 69.5 | 69.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| Analyzer Sample Flow Meter Readings | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.1 | 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 | 1.3 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.7 | 1.7 | 1.65 | 1.6 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 660 | | | |
| DAHS Checks | | | | | | | | | |
| Check DAHS for nornal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

REMARKS:

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | 3/30/20 | 3/31/20 | 4/1/20 | 4/2/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1170 | 1110 | 1090 | 1050 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1280 | 1220 | 1200 | 1150 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1670 | 1620 | 1600 | 1560 | | | |
| Stack Sample Line | | | | | | | | | |
| 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 | 6.5 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.5 | 5.8 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.1 | 6.0 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Visual Checks | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 67.5 | 68.5 | 69.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| Analyzer Sample Flow Meter Readings | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.0 | 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 | 1.3 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.6 | 1.65 | 1.7 | 1.7 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 nornal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 4/6/20 | 4/7/20 | 4/8/20 | 4/9/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 970 | 920 | 910 | 860 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1060 | 940 | 910 | 870 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1430 | 1410 | 1400 | 1370 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.8 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.1 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 69.0 | 69.5 | 68.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.1 | 4.3 | | | |
| 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 | 1.6 | 1.6 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.35 | 1.35 | 1.3 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.7 | 1.7 | 1.7 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 600 | 600 | 600 | 600 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 4/13/20 | 4/14/20 | 4/15/20 | 4/16/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 870 | 870 | 880 | 880 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 850 | 860 | 900 | 890 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1360 | 1360 | 1360 | 1370 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 6.6 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.8 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.6 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.1 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 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 | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.1 | 4.1 | 4.3 | 4.3 | | | |
| 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 | 1.6 | 1.6 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.3 | 1.3 | 1.35 | 1.35 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.65 | 1.6 | 1.6 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 590 | 590 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nornal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | 4/20/20 | 4/21/20 | 4/22/20 | 4/23/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 820 | 800 | 790 | 780 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 800 | 790 | 760 | 770 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1320 | 1260 | 1210 | 1210 | | | |
| Stack Sample Line | | | | | | | | | |
| 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 | 6.6 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.8 | 5.8 | 5.8 | 5.8 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.5 | 6.6 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.0 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Visual Checks | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 67.5 | 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 | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| Analyzer Sample Flow Meter Readings | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 4.1 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.6 | 1.55 | 1.6 | | | |
| 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 | 1.65 | 1.7 | 1.65 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 580 | 580 | 660 | 650 | | | |
| DAHS Checks | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | Y | | | | | |

REMARKS:

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 4/27/20 | 4/28/20 | 4/29/20 | 4/30/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 720 | 700 | 680 | 680 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 690 | 680 | 640 | 660 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1140 | 1140 | 1120 | 1110 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.7 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.6 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.0 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.0 | 69.5 | 68.0 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.1 | 4.3 | 4.3 | 4.3 | | | |
| $O_2$ 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 | 1.65 | 1.65 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 5/4/20 | 5/5/20 | 5/6/20 | 5/7/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 650 | 620 | 650 | 620 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 620 | 580 | 760 | 560 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1110 | 1080 | 1050 | 1140 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.8 | 6.4 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.6 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 5.9 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | 70.0 | 68.5 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.55 | | | |
| 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 | 1.65 | 1.65 | 1.6 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 5/11/20 | 5/12/20 | 5/13/20 | 5/14/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 570 | 520 | 520 | 540 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 470 | 460 | 430 | 460 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 990 | 960 | 940 | 950 | | | |
| **Stack Sample Line** | | | | | | | | | |
| Sample Line Temperature | TC1 | 250ºF | 250 | 250 | 250 | 250 | | | |
| Sample NH3 Temperature - | TC2 | 760ºF | 760 | 760 | 760 | 760 | | | |
| Sample Line Pressure/Vacuum | PI-1 | 6.0 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.8 | 5.7 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.0 | 6.0 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 70.0 | 69.5 | 68.0 | 70.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.6 | 1.65 | 1.6 | 1.7 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 600 | 600 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | 5/26/20 | 5/27/20 | 5/28/20 | | | |
| Technician's Initial | | | | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | 1980 | 1890 | 1890 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | 1700 | 1640 | 1620 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | 690 | 630 | 620 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | | 6.3 | 6.4 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | 5.7 | 5.8 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | 6.5 | 6.6 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | 6.0 | 6.1 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | 68.0 | 68.5 | 69.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | | Please enter readings | | | | | |
| System Flow | FM-1 | 3-5 LPM | | 4.3 | 4.1 | 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 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | 1.4 | 1.4 | 1.4 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | 1.7 | 1.7 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | 4.5 | 4.5 | 4.5 | | | |
| 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 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | 590 | 580 | 550 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | | Y | Y | Y | | | |
| Check printer status | | | | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | | | | **5/29/20** | | |
| Technician's Initial | | | | | | | **JW** | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | | | | 1750 | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | | | | 1400 | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | | | | 510 | | |
| **Stack Sample Line** | | | | | | | | | |
| Sample Line Temperature | TC1 | 250°F | | | | | 250 | | |
| Sample NH3 Temperature - | TC2 | 760°F | | | | | 760 | | |
| Sample Line Pressure/Vacuum | PI-1 | 6.0 "Hg | | | | | 6.2 | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | | | | 5.1 | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | | | | 6.5 | | |
| Sample Line Pressure | PI-5 | 8 Psi | | | | | 5.8 | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | | | | Y | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | | | | Y | | |
| **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 | | | | | Y | | |
| Moisture Sensor B/Filter | MS-2 | | | | | | Y | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | | | | Y | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | | | | Y | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | | | | Y | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | | | | Y | | |
| **Analyzer Sample Flow Meter Readings** | | | | | Please enter readings | | | | |
| System Flow | FM-1 | 3-5 LPM | | | | | 4.2 | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | | | | | 1.5 | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | | | | | 1.6 | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | | | | 1.2 | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | | | | 1.6 | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | | | | | N/A | | |
| System Flow | FM-7 | 3-5 LPM | | | | | 4.2 | | |
| 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 nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | | | | Y | | |
| Check Alarms in DAHS. | | | | | | | Y | | |
| Check chart recorder for normal operation | | | | | | | Y | | |
| Check printer status | | | | | | | Y | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | | | | Y | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | | | | Y | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | Y | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 6/8/20 | 6/9/20 | 6/10/20 | 6/11/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1630 | 1610 | 1590 | 1550 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1330 | 1310 | 1300 | 1260 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 370 | 310 | 290 | 270 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.1 | 6.1 | 6.2 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 5.4 | 5.4 | 5.3 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.7 | 5.8 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 70.0 | 67.5 | 70.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 4.1 | | | |
| 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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.5 | 1.55 | 1.55 | 1.55 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 600 | 600 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | | | | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 6/15/20 | 6/16/20 | 6/17/20 | 6/18/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1500 | 1470 | 1390 | 1320 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1100 | 1100 | 1010 | 970 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 2050 | 2020 | 1940 | 1890 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.8 | 6.1 | 6.1 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 4.7 | 5.1 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.7 | 5.8 | 5.7 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 67.5 | 68.0 | 68.0 | 67.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.2 | 4.0 | 4.1 | 4.1 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.45 | 1.55 | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.6 | 1.55 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.2 | 1.1 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.5 | 1.55 | 1.6 | 1.6 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.2 | 4.2 | 4.2 | 4.3 | | | |
| NOX/NH3 Analyzer | FM-8 | 1.5 LPM | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| 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 "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 5/18/20 | 5/19/20 | 5/20/20 | 5/21/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 420 | 400 | 400 | 410 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 310 | 300 | 290 | 300 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 830 | 810 | 810 | 810 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.7 | 5.8 | 5.8 | 5.7 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 6.0 | 6.0 | 6.1 | 6.0 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 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 | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.45 | 1.4 | 1.4 | 1.4 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.65 | 1.65 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| 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 | 590 | 590 | 590 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 6/22/20 | 6/23/20 | 6/24/20 | | | | |
| Technician's Initial | | | JW | JW | JW | | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1210 | 1160 | 1120 | | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 820 | 700 | 690 | | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1730 | 1700 | 1670 | | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.3 | 6.9 | 6.3 | | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 4.6 | 5.1 | | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.6 | 6.5 | | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.7 | 5.7 | 5.7 | | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 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 | Y | Y | Y | | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.0 | 4.1 | | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.45 | 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 | 1.1 | 1.1 | 1.2 | | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.55 | 1.55 | 1.5 | | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | | | | |
| System Flow | FM-7 | 3-5 LPM | 4.2 | 4.2 | 4.3 | | | | |
| 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 | 640 | 640 | 640 | | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | | | | |
| Check printer status | | | Y | Y | Y | | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | 6/29/20 | 6/30/20 | 7/1/20 | | | | |
| Technician's Initial | | | JW | JW | JW | | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1100 | 1100 | 1110 | | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 640 | 640 | 630 | | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1660 | 1640 | 1630 | | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.4 | 6.5 | 6.4 | | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 5.2 | 5.1 | | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.6 | 5.7 | 5.9 | | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | 70.0 | 70.0 | | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | | | | |
| **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 | 1.6 | 1.6 | | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.2 | 1.2 | 1.2 | | | | |
| 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 | N/A | N/A | N/A | | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 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 | 1.35 | 1.35 | 1.35 | | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 650 | 650 | 650 | | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | | | | |
| Check printer status | | | Y | Y | Y | | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | Y | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| Dates | | | 7/6/20 | 7/7/20 | | 7/9/20 | | | |
| Technician's Initial | | | JW | JW | | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1110 | 1050 | | 1030 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 610 | 580 | | 540 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1630 | 1580 | | 1560 | | | |
| Stack Sample Line | | | | | | | | | |
| 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 | 6.4 | | 7.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 5.2 | | 4.6 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | | 6.8 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.7 | | 5.6 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | | Y | | | |
| Visual Checks | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | 69.5 | | 71.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | | Y | | | |
| Analyzer Sample Flow Meter Readings | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.1 | | 4.0 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.55 | 1.55 | | 1.45 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.6 | 1.6 | | 1.55 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | 1.2 | 1.2 | | 1.1 | | | |
| 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 | N/A | N/A | | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | | 4.2 | | | |
| 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 | 1.35 | | 1.35 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 590 | 590 | | 590 | | | |
| DAHS Checks | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | | Y | | | |
| Check printer status | | | Y | Y | | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | Y | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 7/13/20 | 7/14/20 | 7/15/20 | 7/16/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1040 | 1010 | 1070 | 1020 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 540 | 530 | 530 | 500 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1560 | 1560 | 1560 | 1560 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 6.3 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.2 | 5.2 | 5.2 | 5.3 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.7 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 71.0 | 69.0 | 70.5 | 68.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.55 | 1.5 | 1.5 | 1.5 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 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 | 580 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 7/20/20 | 7/21/20 | 7/22/20 | 7/23/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 950 | 940 | 950 | 960 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 420 | 410 | 400 | 1890 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1530 | 1510 | 1490 | 1470 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 7.4 | 6.6 | 6.5 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 4.7 | 5.1 | 5.2 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.8 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.6 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 70.5 | 70.5 | 71.0 | 68.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.0 | 4.3 | 4.3 | 4.3 | | | |
| O2 Analyzer | FM-2 | 1.2 - 1.7 LPM | 1.45 | 1.55 | 1.55 | 1.55 | | | |
| 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 | 1.1 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.5 | 1.5 | 1.55 | 1.5 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 640 | 640 | 640 | 640 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | | | 7/30/20 | | | |
| Technician's Initial | | | | | | JW | | | |
| Callbration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | | | 860 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | | | 1730 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | | | 1440 | | | |
| **Stack Sample Line** | | | | | | | | | |
| Sample Line Temperature | TC1 | 250°F | | | | 250 | | | |
| Sample NH3 Temperature - | TC2 | 760°F | | | | 760 | | | |
| Sample Line Pressure/Vacuum | PI-1 | 6.0 "Hg | | | | 6.4 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | | | 5.3 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | | | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | | | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | | | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | | | Y | | | |
| **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 | | | | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | | | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | | | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | | | Y | | | |
| **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 | | | | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | | | | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | | | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | | | 1.5 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | | | | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | | | 4.3 | | | |
| 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 "Y" if ok, "X" if not | | | | Y | | | |
| Check Alarms in DAHS. | | | | | | Y | | | |
| Check chart recorder for normal operation | | | | | | Y | | | |
| Check printer status | | | | | | Y | | | |
| Check analyzer callbration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | | | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" If ok, "X" if not | | | | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 8/3/20 | 8/4/20 | 8/5/20 | 8/6/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 830 | 820 | 810 | 810 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1670 | 1620 | 1620 | 1620 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1410 | 1370 | 1360 | 1360 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.6 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 6.0 "Hg | 5.3 | 5.3 | 5.2 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.7 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | 69.0 | 70.5 | 69.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| 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 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 580 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 8/10/20 | 8/11/20 | 8/12/20 | 8/13/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 800 | 800 | 810 | 780 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1590 | 1580 | 1560 | 1520 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1360 | 1360 | 1360 | 1260 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 6.4 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.3 | 5.3 | 5.3 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.7 | 5.8 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 68.5 | 69.0 | 70.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 4.1 | | | |
| 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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.5 | 1.5 | 1.5 | 1.6 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 570 | 570 | 570 | 570 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | Y | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 8/17/20 | 8/18/20 | 8/19/20 | 8/20/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 780 | 710 | 710 | 710 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1450 | 1380 | 1380 | 1380 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1250 | 1190 | 1190 | 1190 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 7.2 | 6.6 | 6.6 | 6.6 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 4.6 | 5.2 | 5.1 | 5.1 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.6 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.7 | 5.8 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 70.5 | 68.5 | 70.0 | 70.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.1 | 4.3 | 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 | 1.6 | 1.6 | 1.6 | | | |
| 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 | 1.55 | 1.6 | 1.6 | 1.6 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.0 | 4.3 | 4.3 | 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 | 560 | 560 | 560 | 640 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | **8/25/20** | **8/26/20** | **8/27/20** | | | |
| Technician's Initial | | | | **JW** | **JW** | **JW** | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | 660 | 610 | 600 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | 1300 | 1240 | 1230 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | 1160 | 1120 | 1110 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.6 | 6.9 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | 5.1 | 5.1 | 5.0 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | 6.6 | 6.6 | 6.6 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | 5.7 | 5.7 | 5.6 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | 71.0 | 70.5 | 71.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | Y | Y | Y | | | |
| **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 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | 1.6 | 1.65 | 1.65 | | | |
| Cal Gas Flow (only during Calibration) | FM-6 | > than FM-1 & FM-7 | | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | 4.3 | 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 | | 1.35 | 1.35 | 1.35 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | 640 | 640 | 640 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | | Y | Y | Y | | | |
| Check printer status | | | | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 8/31/20 | 9/1/20 | 9/2/20 | 9/3/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 550 | 550 | 570 | 530 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 1190 | 1150 | 1160 | 1110 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 1100 | 1100 | 1100 | 1010 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 5.2 | 5.2 | 5.2 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.8 | 5.8 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.0 | 69.5 | 69.5 | 69.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.65 | 1.6 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 1.4 | 1.4 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 640 | 640 | 600 | 590 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nomal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | | 9/8/20 | 9/9/20 | 9/10/20 | | | |
| Technician's Initial | | | | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | | 400 | 400 | 400 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | | 980 | 950 | 910 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | | 830 | 830 | 820 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | | 6.8 | 6.5 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | | 5.1 | 5.2 | 5.4 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | | 5.6 | 5.7 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | | 69.5 | 69.0 | 68.0 | | | |
| Molsture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | | Y | Y | Y | | | |
| **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 | 1.6 | 1.6 | | | |
| NOX By-Pass | FM-4 | 1.2 - 1.7 LPM | | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | | 1.65 | 1.65 | 1.6 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | | 4.3 | 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 | 1.4 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | | 560 | 560 | 560 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | | Y | Y | Y | | | |
| Check printer status | | | | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 9/14/20 | 9/15/20 | 9/16/20 | 9/17/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 370 | 2030 | 1910 | 1820 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 890 | 820 | 780 | 730 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 810 | 800 | 670 | 630 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.6 | 6.7 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.3 | 5.4 | 5.2 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.8 | 5.8 | 5.7 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 68.5 | 69.0 | 69.5 | 71.0 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **Analyzer Sample Flow Meter Readings** | | | Please enter readings | | | | | | |
| System Flow | FM-1 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 4.1 | | | |
| 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 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| CO Analyzer | FM-5 | 1.2 - 1.7 LPM | 1.65 | 1.65 | 1.65 | 1.65 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 550 | 550 | 630 | 630 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | Y | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
## Quality Assurance Checks
## Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 9/21/20 | 9/22/20 | 9/23/20 | 9/24/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1740 | 1840 | 1880 | 1840 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 680 | 630 | 610 | 520 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 610 | 610 | 530 | 490 | | | |
| **Stack Sample Line** | | | | | | | | | |
| 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 | 6.5 | 6.6 | 6.5 | | | |
| Sample Line Pressure/Vacuum | PI-2 | 8.0 "Hg | 5.3 | 5.3 | 5.3 | 5.4 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.8 | 5.9 | 5.8 | 5.9 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 70.5 | 69.0 | 71.0 | 68.5 | | | |
| Moisture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.65 | 1.6 | 1.6 | 1.65 | | | |
| 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 | 1.65 | 1.65 | 1.65 | 1.65 | | | |
| Cal Gas Flow (**only during Calibration**) | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 630 | 630 | 630 | 640 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for nornal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | Y | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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

# McGrath Peaker Generating Station
# Quality Assurance Checks
# Daily Preventive Maintenance

| Parameters to Check | Tag ID | Limits | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|
| **Dates** | | | 9/28/20 | 9/29/20 | 9/30/20 | 10/1/20 | | | |
| Technician's Initial | | | JW | JW | JW | JW | | | |
| Calibration Gas Pressures | | | | | | | | | |
| O2/CO High Span, NOX Zero | SV1 | >150 psi | 1790 | 1780 | 1720 | 1820 | | | |
| NOX Low Span/CO Low Span | SV2 | >150 psi | 560 | 530 | 510 | 580 | | | |
| NOX High Span, O2/CO Zero | SV3 | >150 psi | 490 | 480 | 440 | 430 | | | |
| **Stack Sample Line** | | | | | | | | | |
| Sample Line Temperature | TC1 | 250ºF | 250 | 250 | 250 | 250 | | | |
| Sample NH3 Temperature - | TC2 | 760ºF | 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 | 5.4 | 5.4 | 5.2 | 5.2 | | | |
| Sample Line Pressure/Vacuum | PI-4 | 7.5 "Hg | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Sample Line Pressure | PI-5 | 8 Psi | 5.7 | 5.9 | 5.7 | 5.8 | | | |
| Verify Functionality of Sample Pump A Flow Switch | FS-1 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| Verify Functionality of Sample Pump B Flow Switch | FS-2 | 5-7 LPM (set point) | Y | Y | Y | Y | | | |
| **Visual Checks** | | | | | | | | | |
| Room Enclosre Temperature | Check HVAC controls | 72 F (+/-5) F | 69.5 | 68.5 | 71.0 | 69.5 | | | |
| Molsture Sensor A/Filter | MS-1 | Clean and dry, if filter shows buildup and flow levels are dropping, replace filter | Y | Y | Y | Y | | | |
| Moisture Sensor B/Filter | MS-2 | | Y | Y | Y | Y | | | |
| Operational Status of Sample Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Operational Status of Condendate Drain Pumps (2) | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check LED status of Sample Cooler | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| NH3 Scrubber Drain | HV-4 | Drain as needed | Y | Y | Y | Y | | | |
| **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 | 1.55 | 1.55 | | | |
| NOx Analyzer | FM-3 | 1.2 - 1.7 LPM | 1.65 | 1.6 | 1.6 | 1.6 | | | |
| 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 | 1.65 | 1.65 | 1.65 | 1.6 | | | |
| Cal Gas Flow **(only during Calibration)** | FM-6 | > than FM-1 & FM-7 | N/A | N/A | N/A | N/A | | | |
| System Flow | FM-7 | 3-5 LPM | 4.3 | 4.3 | 4.3 | 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 | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| NOX Dry Air | FM-10 | 500- 700 CCM | 580 | 580 | 580 | 580 | | | |
| **DAHS Checks** | | | | | | | | | |
| Check DAHS for normal operation. Is system logging data? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Check Alarms in DAHS. | | | Y | Y | Y | Y | | | |
| Check chart recorder for normal operation | | | Y | Y | Y | Y | | | |
| Check printer status | | | Y | Y | Y | Y | | | |
| Check analyzer calibration drift. Did all calibrations pass? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Is yellow "WARNING" status indicating? | | Check "Y" if ok, "X" if not | Y | Y | Y | Y | | | |
| Make drift adjustments and perform full hands-off calibration | | | | | | | | | |

**REMARKS:**

**Mark as either Acceptable "Y", 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