



OFFICE OF THE VICE CHANCELLOR FOR RESEARCH  
119 CALIFORNIA HALL #1500

BERKELEY, CALIFORNIA 94720-1500

Via email to [compliance@baaqmd.gov](mailto:compliance@baaqmd.gov) and hard copy sent via U.S. Postal Service

October 27, 2022

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
Attn: Title V Reports

TV Tracking #: 591

1.  RECEIVED IN ENFORCEMENT: 10/28/2022

RE: UC Berkeley, Facility #A0059 – Semi-Annual Monitoring Report for the Title V Operating Permit, April 01, 2022 – September 30, 2022

Dear Director of Compliance and Enforcement:

This monitoring report satisfies the semi-annual reporting requirements for the University of California, Berkeley (Facility #A0059), for the reporting period of **April 01, 2022 – September 30, 2022**.

Enclosed are the Tables of Applicable Emission Limits and Compliance Monitoring Requirements referenced in the Title V Operating Permit, issued July 07, 2022.

Below is the summary of DAS system events, CEMS system events and other events as previously submitted in our monthly emission reports during this time period:

### Summary of DAS System Events

- **04/02/2022 (02:00-12:00):** BAD data was recorded for the main stack due to the gas turbine offline.
- **04/20/2022 (00:00) - 04/26/2022 (20:00):** BAD data was recorded for the main stack due to the gas turbine offline.
- **06/23/2022 (14:00-16:00):** BAD data was recorded for both stacks due to routine maintenance.
- **08/25/2022 (09:00-11:00):** BAD data was recorded for both stacks due to Maintenance Mode for Quarterly CGA.
- **09/17/2022 (07:00-13:00):** BAD data was recorded for both stacks due to a scheduled shutdown for PG&E work.

### Summary of CEMS System Events

- **06/20/2022 (09:00-18:00, 20:00-22:00, 23:00-24:00):** BAD data was recorded for both stacks due to CEMS updates.

## Summary of Other Events

- **04/01/2022 (14:00) – 04/02/2022 (02:00):** UC Berkeley filed a RCA Form (reference #08G90) for an exceedance observed on the main stack over 200ppm (variable 3 hr average data ranging from 208.1 – 530.7 ppm CO) on April 8, 2022. All NOx values remained within emissions limits. Outside support was required to determine if this was a failed monitor or actual exceedance. Review of CEMS and GT controls data determined exceedance was due to breakdown of T3 Probe.


## Schedule of Compliance Status Updates / Deviations

- **RCA 08G90:** From 14:00 April 1, 2022 to 02:40 April 2, UC Berkeley observed an exceedance in CO on the main stack (S201/202) of the Co-generation plant. The allowable limit is 200 ppm, and 3-hour average data for that time period ranged from 208.1 – 530.7 ppm CO. All NOx values remained within emissions limits. Outside support was retained to determine the cause through a review of CEMS and GT controls data. It was determined the exceedance was due to a breakdown of the T3 probe. The unit tripped from a flame out condition triggered by the failed probe. The probe was replaced and emissions returned to within limits following startup on April 2, 2022. A letter of UC Berkeley's deviation was submitted to the Air District on July 12, 2022 and is attached.

If you have any questions regarding the enclosed information, please contact Miranda Monge at [mirandam17@berkeley.edu](mailto:mirandam17@berkeley.edu).

Based upon the information and belief formed after a reasonable inquiry, I, as the Responsible Official, certify the information contained in this report as accurate and true to the best of my knowledge.

Sincerely,



Katherine Yelick  
Vice Chancellor for Research

Enclosures

cc Grace Leung, BAAQMD Inspector  
Norris Herrington, UC Berkeley  
Alicia Bihler, UC Berkeley  
Patrick Goff, UC Berkeley  
Diane Coppini, UC Berkeley

**Table VII-A  
Applicable Limits and Compliance Monitoring Requirements  
S2, S3, S4, Boilers**

| Type of Limit | Emission Limit Citation | FE Y/N | Future Effective Date | Emission Limit   | Monitoring Requirement Citation | Monitoring Frequency (P/C/N)  | Monitoring Type            | Compliance |    |
|---------------|-------------------------|--------|-----------------------|--|---------------------------------|---|----------------------------|------------|----|
|               |                         |        |                       |  |                                 |   |                            | Yes        | No |
| NOx           | BAAQMD 9-7112.2         | N      |                       | 30 ppmvd @ 3% O <sub>2</sub> , dry   | Condition 14330, Part 5         | P/every calendar year of operation starting date of renewal of Title V permit in 2019 | Portable monitor           | X          |    |
| NOx           | SIP 9-7-301.1           | Y      |                       | 30 ppmv @ 3% O <sub>2</sub> , dry, when operating on gaseous fuels                                     | Condition 14330, Part 5         | P/every calendar year of operation starting date of renewal of Title V permit in 2019 | Portable monitor           | X          |    |
| NOx           | SIP 9-302.1             | Y      |                       | 40 ppmv @ 3% O <sub>2</sub> , dry, when operating on non-gaseous fuels                                 |                                 | N   |                            | X          |    |
| NOx           | SIP 9-7-303             | Y      |                       | Weighted average of 9-7-301.1 and 9-7-302.1  | BAAQMD 97-501                   | C   | Non-resettable fuel meters | X          |    |
| NOx           | SIP 9-7-305.1           | Y      |                       | 150 ppmv @ 3% O <sub>2</sub> , dry, when operating on non-gaseous fuels during natural gas curtailment |                                 | N   |                            | X          |    |
| NOx           | SIP 9-7-306.1           | Y      |                       | 150 ppmv @ 3% O <sub>2</sub> , dry, when operating on non-gaseous fuels for equipment testing          |                                 | N   |                            | X          |    |
| CO            | BAAQMD 9-7112.2         | N      |                       | 400 ppmvd @ 3% O <sub>2</sub>  | Condition 14330, Part 5         | P/every calendar year of operation starting date of renewal of Title V permit in 2019 | Portable monitor           | X          |    |
| CO            | SIP 9-7-301.2           | Y      |                       | 400 ppmv @ 3% O <sub>2</sub> , dry   | Condition 14330, Part 5         | P/every calendar year of operation starting date of renewal of Title V permit in 2019 | Portable monitor           | X          |    |
| CO            | SIP 9-7-302.2           | Y      |                       | 400 ppmv @ 3% O <sub>2</sub> , dry   |                                 | N   |                            | X          |    |
| CO            | SIP 9-7-303             | Y      |                       | 400 ppmv @ 3% O <sub>2</sub> , dry   |                                 | N   |                            | X          |    |
| CO            | SIP 9-7-305.2           | Y      |                       | 400 ppmv @ 3% O <sub>2</sub> , dry   |                                 | N   |                            | X          |    |
| CO            | SIP 9-7-306.2           | Y      |                       | 400 ppmv @ 3% O <sub>2</sub> , dry   |                                 | N   |                            |            |    |

|                  |                            |   |  |   |                         |   |   |   |  |
|------------------|----------------------------|---|--|---|-------------------------|---|---|---|--|
| Opacity          | BAAQMD Regulation 6-1-301  | N |  | >Ringelmann 1.0 for < 3 minutes in any hour   | Condition 14330, Part 6 | P/E, after firing for 200 hours on fuel oil | Visible emission inspection   | X |  |
| Opacity          | SIP Regulation 6-301       | Y |  | >Ringelmann 1.0 <3 minutes in any hour  | Condition 14330, Part 6 | P/E, after firing for 200 hrs on fuel oil   | Visible emission inspection   | X |  |
| FP               | BAAQMD Regulation 6-1310.3 | N |  | 0.15 gr/dscf @ 6% O2  |                         | N   |   | X |  |
| FP               | SIP Regulation 6-310.3     | Y |  | 0.15 gr/dscf @ 6% O2  |                         | N   |   | X |  |
| SO2              | BAAQMD 9-1-301             | Y |  | Property Line Ground Level Limits: < 0.5 ppm for 3 minutes and < 0.25 ppm for 60 min and <0.05 ppm for 24 hours | None                    | N   | N/A   | X |  |
|                  | BAAQMD 9-1-302             | Y |  | 300 ppm when burning gaseous fuels  |                         |   |   | X |  |
|                  | BAAQMD 9-1-304             | Y |  | 0.5% wt Sulfur in liquid fuel   |                         | N   |   | X |  |
| Heat input limit | BAAQMD 9-7-112.2           | N |  | < 120,012 MMBtu/any consecutive 12-month period for each boiler   | BAAQMD 9-7-504          | C   | Non-resettable fuel meters for each fuel for each boiler within one year of renewal of Major Facility Review permit | X |  |

**Table VII-B Applicable Limits and Compliance Monitoring Requirements**

**S62, S63, S64, S65, S105, S106, S107, S108, S109, S110, S111, S112, S113, S114, S115, S116, S117, S118, S120, S121, S122, S123, S125, S126, S128, S129, S130, S131, S132, S133, S142, S143, S144, S145, S200, In-use Emergency Diesel Engine Generators**

| Type of Limit   | Emission Limit Citation     | FE Y/N | Future Effective Date | Emission Limit   | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type | Compliance |    |
|-----------------|-----------------------------|--------|-----------------------|--|---------------------------------|------------------------------|-----------------|------------|----|
|                 |                             |        |                       |  |                                 |                              |                 | Yes        | No |
| Opacity         | BAAQMD Regulation 6-1-303.1 | N      |                       | >=Ringlemann 2.0 for < 3 minutes in any hour.  |                                 | N                            |                 | X          |    |
| Opacity         | SIP Regulation 6-303.1      | Y      |                       | >=Ringleman 2.0 for < 3 minutes in any hour  |                                 | N                            |                 | X          |    |
| FP              | BAAQMD Regulation 6-1-310.1 | N      |                       | 0.15 gr/dscf   |                                 | N                            |                 | X          |    |
| FP              | SIP Regulation 6-310        | Y      |                       | 0.15 gr/dscf   |                                 | N                            |                 | X          |    |
| SO <sub>2</sub> | BAAQMD 9-1-301              | Y      |                       | Property Line Ground level limits: <=0.5 ppm for 3 minutes and <= 0.25 ppm for 60 min. and <= 0.05 ppm for 24 hours. | None                            | N                            | N/A             | X          |    |
| SO <sub>2</sub> | BAAQMD 9-1-304              | Y      |                       | 0.5% wt. Sulfur in liquid fuel   |                                 | N                            |                 | X          |    |
|                 | CARB ATCM 93115.5(a)(1)     | N      |                       | Sulfur content of diesel fuel ≤ 15 ppmw  |                                 | N                            |                 | X          |    |

|                    |                                  |   |          |  |   |       |  |   |  |
|--------------------|----------------------------------|---|----------|--|---|-------|--|---|--|
| Hours of Operation | BAAQMD 9-8-330.1                 | N |          | Unlimited hours for emergencies  | BAAQMD 9-8-530.2                        | C P/M | Hour Meter, Records of Operating Hours | X |  |
| Hours of Operation | BAAQMD 9-8-330.3                 | N | 1/1/2012 | 50 hours per calendar year or permit limit whichever is lower for reliability-related activities   | BAAQMD 9-8-530                          | C P/M | Hour Meter, Records of Operating Hours | X |  |
|                    | BAAQMD Condition #22728 Part 2   | Y |          | Applies to S145 Unlimited hours for emergencies  | BAAQMD Condition 22728, Part 5          | C P/M | Hour Meter, Record Keeping             | X |  |
|                    | BAAQMD Condition #22728 Part 1   | Y |          | Applies to S145 ≤ 26 hours per year for reliability-related activities   | BAAQMD Condition # 22728, Part 5        | C P/M | Hour Meter, Record Keeping             | X |  |
| Hours of Operation | BAAQMD Condition # 22820, Part 2 | Y |          | Applies to S105, S106, S107, S108, S111, S112, S113, S114, S115, S117, S120, S121, S122, S123, S125, S126, S128, S129, and S200 Unlimited hours for emergencies                        | BAAQMD Condition # 22820, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
|                    | BAAQMD Condition # 22820, Part 1 | Y |          | Applies to S105, S106, S107, S108, S111, S112, S113, S114, S115, S117, S120, S121, S122, S123, S125, S126, S128, S129, and S200 ≤ 20 hours per year for reliability-related activities | BAAQMD Condition # 22820, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
|                    | BAAQMD Condition # 22826, Part 2 | Y |          | Applies to S62, S63, S64, S65, S133, S142, S143, S144, and S146 Unlimited hours for emergencies  | BAAQMD Condition # 22826, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
| Hours of Operation | BAAQMD Condition # 22826, Part 1 | Y |          | Applies to S62, S63, S64, S65, S133, S142, S143, S144, and S146 ≤ 26 hours per year for reliability-related activities   | BAAQMD Condition # 22826, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
|                    | BAAQMD Condition # 22830, Part 2 | Y |          | Applies to S109, S110, and S118 Unlimited hours for emergencies  | BAAQMD Condition # 22830, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
|                    | BAAQMD Condition # 22830, Part 1 | Y |          | Applies to S109, S110, and S118 ≤ 30 hours per year for reliability-related activities   | BAAQMD Condition # 22830, Parts 3 and 4 | C P/M | Hour meter, record keeping             | X |  |
|                    | BAAQMD Condition # 22850, Part 2 | Y |          | Applies to S130, S131, and S132 Unlimited hours for emergencies  | BAAQMD Condition # 22850, Parts 3 and 4 | C P/M | Hour meter, Record keeping             | X |  |
|                    | BAAQMD Condition # 22850, Part 1 | Y |          | Applies to S130, S131, and S132 ≤ 50 hours per year for reliability-related activities   | BAAQMD Condition # 22850, Parts 3 and 4 | C P/M | Hour meter, Record keeping             | X |  |

**Table VII-C**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S148, S149, S150, S152, S153, S154, S155, S156, S157, S158, S160, S162, S163, S164**  
**New Emergency Diesel Engine Generators**

| Type of Limit      | Emission Limit Citation         | FE Y/N | Future Effective Date | Emission Limit  | Monitoring Requirement Citation         | Monitoring Frequency (P/C/N) | Monitoring Type                        | Compliance |    |
|--------------------|---------------------------------|--------|-----------------------|---|---|------------------------------|--|------------|----|
|                    |                                 |        |                       |   |   |                              |  | Yes        | No |
| Opacity            | BAAQMD Regulation 6-1-303.1     | N      |                       | >Ringelmann 2.0 for < 3 minutes in any hour.  |   | N                            |  | X          |    |
| Opacity            | SIP Regulation 6-303.1          | Y      |                       | >Ringelmann 2.0 for < 3 minutes in any hour   |   | N                            |  | X          |    |
| FP                 | BAAQMD Regulation 6-1-310       | N      |                       | 0.15 gr/dscf  |   | N                            |  | X          |    |
| FP                 | SIP Regulation 6-310            | Y      |                       | 0.15 gr/dscf  |   | N                            |  | X          |    |
| SO <sub>2</sub>    | BAAQMD 9-1-301                  | Y      |                       | Property Line Ground level limits: <0.5 ppm for 3 minutes and < 0.25 ppm for 60 min. and < 0.05 ppm for 24 hours. | None                                    | N                            | N/A                                    | X          |    |
|                    | BAAQMD 9-1-304                  | Y      |                       | 0.5% wt. Sulfur in liquid fuel  |   | N                            |  | X          |    |
|                    | CARB ATCM 93115.5(a)(1)         | N      |                       | Sulfur content of diesel fuel < 15 ppmw   |   | N                            |  |            |    |
| Hours of Operation | BAAQMD 9-8-330.1                | N      |                       | Unlimited hours for emergencies   | BAAQMD 9-8-530.2                        | C P/M                        | Hour Meter, Records of Operating Hours | X          |    |
|                    | BAAQMD 9-8-330.3                | N      | 1/1/2012              | 50 hours per calendar year or permit limit whichever is lower for reliability-related activities                  | BAAQMD 9-8-530                          | C P/M                        | Hour Meter, Records of Operating Hours | X          |    |
|                    | BAAQMD Condition #22850, Part 2 | Y      |                       | Unlimited hours for emergencies   | BAAQMD Condition # 22820, Parts 3 and 4 | C P/M                        | Hour Meter, Record Keeping             | X          |    |
| Hours of Operation | BAAQMD Condition #22850, Part 1 | Y      |                       | < 50 hours per year for reliability-related activities  | BAAQMD Condition # 22820, Parts 3 and 4 | C P/M                        | Hour Meter, Record Keeping             | X          |    |

**Table VII-D**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S139, Emergency Natural Gas Engine Generator**  
**S140, Emergency Propane Engine Generator**

| Type of Limit | Emission Limit Citation     | FE Y/N | Future Effective Date | Emission Limit                             | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type | Compliance |    |
|---------------|-----------------------------|--------|-----------------------|--|---------------------------------|------------------------------|-----------------|------------|----|
|               |                             |        |                       |  |                                 |                              |                 | Yes        | No |
| Opacity       | BAAQMD Regulation 6-1-303.1 | N      |                       | ≥Ringelmann 2.0 for <3 minutes in any hour |                                 | N                            |                 | X          |    |
| Opacity       | SIP Regulation 6-303.1      | Y      |                       | ≥Ringelmann 2.0 for <3 minutes in any hour |                                 | N                            |                 | X          |    |
| FP            | BAAQMD Regulation 6-1-310   | N      |                       | 0.15 gr/dscf                               |                                 | N                            |                 | X          |    |

|                    |                                  |   |          |   |   |       |  |   |  |
|--------------------|----------------------------------|---|----------|---|---|-------|--|---|--|
| FP                 | SIP Regulation 6-310             | Y |          | 0.15 gr/dscf  |   | N     |  | X |  |
| SO2                | BAAQMD 9-1-301                   | Y |          | Property Line Ground Level Limits:<br>≤0.5 ppm for 3 minutes and ≤0.25 ppm for 60 min. and ≤0.05 ppm for 24 hours | None                                    | N     | N/A                                    | X |  |
|                    | BAAQMD 9-1-302                   | Y |          | 300 ppm when burning gaseous fuels  |   | N     |  | X |  |
| Hours of Operation | BAAQMD 9-8-330.1                 | N |          | Unlimited hours for emergencies   | BAAQMD 9-8-530.2                        | C P/M | Hour meter, Records of Operating Hours | X |  |
|                    | BAAQMD 9-8-330.3                 | N | 1/1/2012 | 50 hours per calendar year or permit limit whichever is lower for reliability-related activities                  | BAAQMD 9-8-530                          | C P/M | Hour meter, Records of Operating Hours | X |  |
|                    | BAAQMD Condition # 19533, Part 1 | Y |          | 50 hours per calendar year for reliability-related activities   | BAAQMD Condition # 19533, Parts 2 and 3 | P/E   | Recordkeeping                          | X |  |

**Table VII-E  
Applicable Limits and Compliance Monitoring Requirements  
S151, S159, Emergency Natural Gas Engine Generators**

| Type of Limit | Emission Limit Citation          | FE Y/N | Future Effective Date | Emission Limit   | Monitoring Requirement Citation       | Monitoring Frequency (P/C/N) | Monitoring Type | Compliance |    |
|---------------|----------------------------------|--------|-----------------------|--|---------------------------------------|------------------------------|-----------------|------------|----|
|               |                                  |        |                       |  |                                       |                              |                 | Yes        | No |
| Opacity       | BAAQMD Regulation 6-1-303.1      | N      |                       | ≥Ringelmann 2.0 for <3 minutes in any hour   |                                       | N                            |                 | X          |    |
| Opacity       | SIP Regulation 6-303.1           | Y      |                       | ≥Ringelmann 2.0 for <3 minutes in any hour   |                                       | N                            |                 | X          |    |
| FP            | BAAQMD Regulation 6-1-310        | N      |                       | 0.15 gr/dscf   |                                       | N                            |                 | X          |    |
| FP            | SIP Regulation 6-310             | Y      |                       | 0.15 gr/dscf   |                                       | N                            |                 | X          |    |
| SO2           | BAAQMD 9-1-301                   | Y      |                       | Property Line Ground Level Limits:<br>≤0.5 ppm for 3 minutes and ≤0.25 ppm for 60 min and ≤0.05 ppm for 24 hours | None                                  | N                            | N/A             | x          |    |
|               | BAAQMD 9-1-302                   | Y      |                       | 300 ppm  |                                       | N                            |                 | X          |    |
|               | BAAQMD Condition #23107, Part 1  | Y      |                       | Applies to S159: 50 hours per calendar year for reliability-related activities                                   | BAAQMD Condition 23107, Parts 2 and 3 | P/E                          | Recordkeeping   | X          |    |
|               | BAAQMD Condition # 23112, Part 1 | Y      |                       | Applies to S151: 50 hours per calendar year for reliability-related activities                                   | BAAQMD Condition 23112, Parts 2 and 3 | P/E                          | Recordkeeping   | X          |    |

**Table VII-F  
Applicable Limits and Compliance Monitoring Requirements  
S201, Turbine**

|  |  |  | Future | Emission Limit |  | Monitoring |  | Compliance |
|--|--|--|--------|----------------|--|------------|--|------------|
|--|--|--|--------|----------------|--|------------|--|------------|

| Type of Limit | Emission Limit Citation      | FE Y/N | Effective Date |   | Monitoring Requirement Citation | Frequency (P/C/N) | Monitoring Type | Yes | No |
|---------------|------------------------------|--------|----------------|---|---------------------------------|-------------------|-----------------|-----|----|
| NOx           | BAAQMD 9-9-301.2 and 9-9-603 | N      |                | 0.70 lbs/MW-hr or 20.2 ppmv, 3-hr average when burning natural gas                  | BAAQMD 9-9-501                  | C                 | CEM             | X   |    |
| NOx           | SIP 9-9-303.2                | Y      |                | 20.2 ppmv @ 15% O <sub>2</sub> , dry (adjusted per 9-9-401), except during start-up | SIP 9-9-501                     | C                 | CEM             | X   |    |

|                 |                                |   |  |  |  |           |  |   |  |
|-----------------|--------------------------------|---|--|--|--|-----------|--|---|--|
|                 | BAAQMD Condition #366, Part 4  | Y |  | 0.70 lbs/MW-hr or 20.2 ppmv - natural gas: @ 15% O <sub>2</sub> , 3 hr avg, except during start-up                       | BAAQMD Condition #366, Part 12               | C         | CEM  | X |  |
| NOx             | BAAQMD Condition #366, Part 5  | Y |  | 0.70 lbs/MW-hr or 20.2 ppmv - natural gas: @ 15% O <sub>2</sub> (combined S201 & S202), 3 hr avg, except during start-up | BAAQMD Condition #366, Part 12               | C         | CEM  | X |  |
|                 | BAAQMD Condition #366, Part 10 | Y |  | 547 lb/day when burning natural gas (combined S201 & S202)   | BAAQMD Condition #366, Part 12               | C         | CEM  | X |  |
|                 | NSPS Subpart GG, 60.332(a)(1)  | Y |  | 99 ppmv @ 15% O <sub>2</sub> dry, 4-hr average   | NSPS Subpart GG, 60.334(b)                   | C         | CEM  | X |  |
| CO              | BAAQMD Condition #366, Part 4a | Y |  | 200 ppm @ 15% O <sub>2</sub> , 3-hour average except during start-up   | BAAQMD Condition #366, Part 12a              | C         | CEM  | X |  |
| CO              | BAAQMD Condition #366, Part 5a | Y |  | 200 ppm @ 15% O <sub>2</sub> (combined S201 & S202) 3-hour average except during start-up                                | BAAQMD Condition #366, Part 12a              | C         | CEM  | X |  |
| CO              | BAAQMD Condition #366, Part 10 | Y |  | 2,195 lb/day (combined S201 & S201)  | BAAQMD Condition #366, Parts 10, 12a, and 18 | C         | CEM, annual source test  | X |  |
| SO <sub>2</sub> | BAAQMD 9-1-301                 | Y |  | GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours                                    |  | N         |  | X |  |
| SO <sub>2</sub> | BAAQMD 9-1-302                 | Y |  | 300 ppm (dry)  |  | N         |  | X |  |
| SO <sub>2</sub> | NSPS Subpart GG, 60.333 (a)    | Y |  | 0.015% (vol) @ 15% O <sub>2</sub> (dry), or 0.8% sulfur in gaseous fuel by weight  | NSPS Subpart GG, 60.334 (h)(3)               | P/M or EN | Monthly gaseous fuel analysis or current, valid purchase contract, tariff sheet or transportation contract | X |  |
| Opacity         | BAAQMD 6-1-301                 | N |  | ≥Ringelmann No. 1 for <3 minutes in an hour  |  | None      |  | X |  |
| Opacity         | SIP 6-301                      | Y |  | ≥Ringelmann No. 1 for <3 minutes in an hour  |  | None      |  | X |  |



|    |                                      |   |  |                            |  |   |  |   |  |
|----|--------------------------------------|---|--|----------------------------|--|---|--|---|--|
| FP | BAAQMD<br>6-1-310.1 and<br>6-1-310.3 | N |  | 0.15 grain/dscf @<br>6% O2 |  | N |  | X |  |
| FP | SIP 6-310                            | Y |  | 0.15 grain/dscf @<br>6% O2 |  | N |  | X |  |

<sup>1</sup> Ground Level Concentration

**Table VII-G  
Applicable Limits and Compliance Monitoring Requirements  
S-202, Duct Burner**

| Type of Limit | Emission Limit Citation  | FE Y/N | Future Effective Date | Emission Limit   | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type | Compliance |    |
|---------------|--------------------------|--------|-----------------------|--|---------------------------------|------------------------------|-----------------|------------|----|
|               |                          |        |                       |  |                                 |                              |                 | Yes        | No |
| NOx           | BAAQMD 9-9-301.2         | N      |                       | 0.70 lbs/MW-hr or 15 ppmv, 3-hr average when burning natural gas   | BAAQMD 9-9-501                  | C                            | CEM             | X          |    |
| NOx           | SIP 9-9-303.2            | Y      |                       | 20.2 ppmv @ 15% O2, dry (adjusted per 9-9-401), except during start-up                                     | BAAQMD 9-9-501                  | C                            | CEM             | X          |    |
| NOx           | BAAQMD Cond #366, Part 5 | Y      |                       | 0.70 lbs/MW-hr or 15 ppmv - natural gas: @ 15% O2 (combined S201 & S202), 3 hr avg, except during start-up | BAAQMD Condition #366, Part 12  | C                            | CEM             | X          |    |

|         |                                |   |  |   |  |           |  |   |  |
|---------|--------------------------------|---|--|---|--|-----------|--|---|--|
|         | BAAQMD Condition #366, Part 10 | Y |  | 547 lb/day (combined S201 & S202)   | BAAQMD Condition #366, Parts 9 and 12        | C         | CEM  | X |  |
|         | NSPS Subpart GG, 60.332(a)(1)  | Y |  | 99 ppmv @ 15% O2 dry, 4-hr average  | NSPS Subpart GG, 60.334(b)                   | C         | CEM  | X |  |
| CO      | BAAQMD Condition #366, Part 5a | Y |  | 200 ppm @ 15% O2 (combined S201 & S202) 3-hour average except during start-up         | BAAQMD Condition #366, Part 12a              | C         | CEM  | X |  |
| CO      | BAAQMD Condition #366, Part 10 | Y |  | 2,195 lb/day (combined S201 & S202)   | BAAQMD Condition #366, Parts 10, 12a, and 18 | C         | CEM, annual source test  | X |  |
| SO2     | BAAQMD 9-1-301                 | Y |  | GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours |  | N         |  | X |  |
| SO2     | BAAQMD 9-1-302                 | Y |  | 300 ppm (dry)   |  | N         |  | X |  |
| SO2     | NSPS Subpart GG, 60.333 (a)    | Y |  | 0.015% (vol) @ 15% O2 (dry) or 0.8% sulfur in gaseous fuel by weight                  | NSPS Subpart GG, 60.334 (h)(3)               | P/M or EN | Monthly gaseous fuel analysis or current, valid purchase contract, tariff sheet or transportation contract | X |  |
| Opacity | BAAQMD 6-1-301                 | N |  | ≥Ringelmann No. 1 for < 3 minutes in an hour  |  | None      |  | X |  |

<sup>1</sup> Ground Level Concentration

|         |                                      |   |  |  |  |      |  |   |  |
|---------|--------------------------------------|---|--|--|--|------|--|---|--|
| Opacity | SIP 6-301                            | Y |  | ≥Ringelmann No. 1<br>for < 3 minutes in an<br>hour |  | None |  | X |  |
| FP      | BAAQMD<br>6-1-310.1 and<br>6-1-310.3 | N |  | 0.15 grain/dscf @ 6%<br>O2                         |  | N    |  | X |  |
| FP      | SIP 6-310                            | Y |  | 0.15 grain/dscf @ 6%<br>O2                         |  | N    |  | X |  |

**Table VII-H  
Applicable Limits and Compliance Monitoring Requirements  
S100, Facility-wide Painting Operations**

| Type of Limit | Emission Limit Citation | FE Y/N | Future Effective Date | Emission Limit  | Monitoring Requirement Citation                 | Monitoring Frequency (P/C/N) | Monitoring Type | Compliance |    |
|---------------|-------------------------|--------|-----------------------|---|---|------------------------------|-----------------|------------|----|
|               |                         |        |                       |   |   |                              |                 | Yes        | No |
| VOC           | BAAQMD 8-19-302         | Y      |                       | Baked Coatings:<br>2.3 lb/gal<br>Air Dried Coatings:<br>2.8 lb/gal                                | BAAQMD 8-19-501 and Condition 21880, Part 1c.iv | P/W/M                        | Records         | X          |    |
| VOC           | BAAQMD 8-19-312.1       | Y      |                       | Camouflage:<br>Baked Coatings:<br>3.0 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal                 | BAAQMD 8-19-501 and Condition 21880, Part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.3       | Y      |                       | Heat Resistant:<br>Baked Coatings:<br>3.0 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal             | BAAQMD 8-19-501 and Condition 21880, Part 1c.iv | P/W/M                        | Records         | X          |    |
| VOC           | BAAQMD 8-19-312.4       | Y      |                       | High Performance Architectural Baked Coatings:<br>3.5 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal | BAAQMD 8-19-501 and Condition 21880, Part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.5       | Y      |                       | Metallic Topcoat<br>Baked Coatings:<br>3.0 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal            | BAAQMD 8-19-501 and Condition 21880, Part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.7       | Y      |                       | Pretreatment Wash<br>Primer Baked Coatings:<br>3.5 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal    | BAAQMD 8-19-501 and Condition 21880, part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.8       | Y      |                       | Silicon Release<br>Baked Coatings:<br>3.5 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal             | BAAQMD 8-19-501 and Condition 21880, part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.9       | Y      |                       | Solar Absorbent<br>Baked Coatings:<br>3.0 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal             | BAAQMD 8-19-501 and Condition 21880, part 1c.iv | P/W/M                        | Records         | X          |    |
|               | BAAQMD 8-19-312.12      | Y      |                       | Extreme Performance<br>Baked Coatings:<br>3.5 lb/gal<br>Air Dried Coatings:<br>3.5 lb/gal         | BAAQMD 8-19-501 and Condition 21880, part 1c.iv | P/W/M                        | Records         | X          |    |

|            |                          |   |  |   |   |       |               |   |  |
|------------|--------------------------|---|--|---|---|-------|---------------|---|--|
| VOC        | BAAQMD 8-19-312.13       | Y |  | High Temperature Baked Coatings: 3.5 lb/gal<br>Air Dried Coatings: 3.5 lb/gal | BAAQMD 8-19-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-23-301          | Y |  | 2.1 lb/gal  | BAAQMD 8-23-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-302          | Y |  | 2.8 lb/gal  | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-306.1        | Y |  | Flexible Parts:<br>Flexible Primer:<br>4.1 lb/gal                             | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-306.2        | Y |  | Flexible Parts:<br>Color Topcoat:<br>3.8 lb/gal                               | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
| VOC        | BAAQMD 8-31-306.3        | Y |  | Flexible Parts: Base coat/clear coat (combined system):<br>2.8 lb/gal         | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
| VOC        | BAAQMD 8-31-309.1        | Y |  | Camouflage:<br>3.5 lb/gal   | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-309.2        | Y |  | Conductive:<br>2.7 lb/gal   | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-309.3        | Y |  | Metallic Topcoat:<br>3.5 lb/gal   | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-309.4        | Y |  | Extreme Performance:<br>6.2 lb/gal  | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-309.5        | Y |  | High Gloss:<br>3.5 lb/gal   | BAAQMD 8-31-501 and Condition 21880, part 1c.iv | P/W/M | Records       | X |  |
| VOC        | BAAQMD 8-31-309.6        | Y |  | Optical:<br>6.7 lb/gal  | BAAQMD 8-31-501 and Condition 21880, Part 1c.iv | P/W/M | Records       | X |  |
|            | BAAQMD 8-31-301          | Y |  | See rule  |   | N     |               | X |  |
| Throughput | Condition 21880, part 1a | Y |  | Non-water-based coating < 80 gal/consecutive 12month period                   | Condition 21880, part 1c.iii                    | P/W/M | Recordkeeping | X |  |
|            | Condition 21880, part 1a | Y |  | Water-based coating <250 gal/consecutive 12-month period                      | Condition 21880, part 1c.iii                    | P/W/M | Recordkeeping | X |  |

|  |                          |   |  |  |  |       |               |   |  |
|--|--------------------------|---|--|--|--|-------|---------------|---|--|
|  | Condition 21880, part 1b | Y |  | Cleanup and surface preparation solvent <10 gal/consecutive 12month period | Condition 21880, part 1c.i and 1c.iii  | P/W/M | Recordkeeping | X |  |
|  | Condition 21880, part 1b | Y |  | Organic thinner < 10 gal/consecutive 12month period                        | Condition 21880, part 1c.ii and 1c.iii | P/W/M | Recordkeeping | X |  |



OFFICE OF ENVIRONMENT, HEALTH AND SAFETY  
317 UNIVERSITY HALL  
BERKELEY, CALIFORNIA 94720-1150

Via email to: [compliance@baaqmd.gov](mailto:compliance@baaqmd.gov)

July 12, 2022

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
Attn: Title V Reports

RE: UC Berkeley, Facility #A0059 – Source 201/202 – Mains tack CO exceedance (ID #08G90)

Dear Director of Compliance and Enforcement:

This letter is to inform you of UC Berkeley's deviation from the Title V Operating Permit, issued in April 2022.

From 14:00 April 1, 2022 to 02:40 April 2, UC Berkeley observed an exceedance in CO on the main stack (S201/202) of the Co-generation plant. The allowable limit is 200 ppm, and 3-hour average data for that time period ranged from 208.1 – 530.7 ppm CO. All NOx values remained within emissions limits. Outside support was retained to determine the cause through a review of CEMS and GT controls data. It was determined the exceedance was due to a breakdown of the T3 probe. The unit tripped from a flame out condition triggered by the failed probe. The probe was replaced and emissions returned to within limits following startup on April 2, 2022.

If you have any questions or concerns, please contact Alicia Bihler at [abihler@berkeley.edu](mailto:abihler@berkeley.edu).

Sincerely,

A handwritten signature in cursive script that reads "Alicia Bihler".

Alicia Bihler  
Environmental Programs Manager

Cc Grace Leung, BAAQMD Inspector  
Norris Herrington, UC Berkeley