HEARING BOARD MEETING
SacMetro AQMD
777 12th Street, 3rd Floor
Sacramento, California 95814

# AGENDA

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

**Thursday** **March 21, 2024** **4:00 PM**

## Hearing Board Members

Jonathan Ellison Tim Olson Darrel Woo

## ANNOUNCEMENTS

This meeting has been POSTPONED until Thursday, March 28, 2024.

## CALL TO ORDER

## DISCUSSION AND ACTION ITEMS

1. Selection of Hearing Board Chairperson

   Selection of new chair and vice chair, and delegation of authority to hear emergency variance petitions.

## HEARING ITEMS

2. **Mitsubishi Chemical Carbon Fiber and Composites, Inc.** 2024-002

   Modify a Final Compliance Date

   Recommendation: Staff supports the requested modification of final compliance dates if the Board determines that there is good cause for the extension. Staff recommends that if the Board grants the modification, it do so subject to the following conditions:

   1. Continue to comply with the following conditions set in the variance:
      a. Operate Line 31 ovens using electricity after the initial heat-up to reduce the NOx emissions.
      b. Notify the District within 48 hours when Line 33 is shut down or restarted.
      c. Notify the District at least 30 days of planned source testing for both regenerative thermal oxidizers (RTOs) and submit a source test plan.
      d. Source test both RTOs (P/O 24520; 24521) to confirm they are back in compliance with emission limits.
   2. Set the term of the variance from Sept. 8, 2023, through Sept. 7, 2024.
   3. New Condition – Source test Oven #2, burner #2 (P/O 25925).
   4. New Condition – Submit permit modification applications for the Thermal Oxidizer as soon as practicable and no later than July 1, 2024.
   5. Pay additional excess emission fees of $1375 prior to issuance of Findings and Orders

3. **Verizon Wireless-Chicken Ranch** 2024-003

   Short-term Variance

   Recommendation: Staff supports the requested variance if the Board determines that

it can make the above findings. Staff recommends adoption of the following conditions:

1. Petitioner must use a Tier 4 engine if the electrical service is not restored by March 29, 2024. District Staff may approve a longer period if Petitioner establishes that it could not reasonably meet the deadline.
2. This Order is not final and will not be issued unless and until Petitioner pays the variance fees.

## PUBLIC COMMENTS

## ADJOURN

**Agenda Revision:** This agenda may be revised. A final agenda will be posted on the website (www.airquality.org) and at the meeting site 72 hours in advance of the meeting. Materials submitted within 72 hours of the meeting and after distribution of the agenda packets will be made available on the Sac Metro Air District website subject to staff's ability to post the documents prior to the meeting. The order of the agenda items are listed for reference and may be taken in any order deemed appropriate by the Hearing Board. The agenda provides a general description and staff recommendation; however, the Hearing Board may take action other than what is recommended.

**Testimony:** The Hearing Board welcomes and encourages participation in Board meetings. When it appears there are several members of the public wishing to address the Board on a specific item, at the outset of the item the Chair of the Board will announce the maximum amount of time that will be allowed for presentation of the testimony. Matters under the jurisdiction of the Board and not on the posted agenda may be addressed by the general public immediately prior to the close of the meeting under Public Comments. The Board limits testimony on matters not on the agenda to five minutes per person and not more than 15 minutes for a particular subject.

**Information:** Full staff reports are available for public review on the District's website (www.airquality.org), including all attachments and exhibits, or for public inspection at the District's office at 777 12th Street, Suite 300, Sacramento, CA. Copies of items prepared by staff and distributed for the first time at the meeting will be available at the back of the meeting room or may be obtained from the Clerk. Copies of items that were not prepared by staff may be obtained after the meeting from the Clerk. Materials related to an item on this Agenda submitted to Sac Metro Air District after distribution of the agenda packet are available for public inspection in the Clerk of the Board's office during normal business hours. For information regarding this agenda, please contact Virginia Muller, Clerk of the Hearing Board, at 279-207-1164.

**Hearing Date** 3/21/2024
**Petitioner** POSTPONED to March 28, 2024, at 4:00 p.m.
**Petition Type**
**Petition Number**

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

---

**Petitioner Request**

**Recommendation**

This meeting has been POSTPONED until Thursday, March 28, 2024.

**Petitioner Address**

**Equipment Location**

---

**Approvals/Acknowledgements**

**Hearing Date** 3/21/2024
**Petitioner** Selection of Hearing Board Chairperson
**Petition Type**
**Petition Number**

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

---

**Petitioner Request**

**Recommendation**

Selection of new chair and vice chair, and delegation of authority to hear emergency variance petitions.

**Petitioner Address**

**Equipment Location**

---

---

**Approvals/Acknowledgements**

**Hearing Date** 3/21/2024
**Petitioner** Mitsubishi Chemical Carbon Fiber and Composites, Inc.
**Petition Type** Modify a Final Compliance Date
**Petition Number** 2024-002

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

## Petitioner Request

Petitioner is requesting that the Board modify the Final Compliance Date for Regular Variance 2023-001 granted by the Hearing Board on October 17, 2023. The original Findings and Orders were covered the period from September 8, 2023, through March 31, 2024. The petition seeks to extend the end date through September 7, 2024.

## Recommendation

Staff supports the requested modification of final compliance dates if the Board determines that there is good cause for the extension. Staff recommends that if the Board grants the modification, it do so subject to the following conditions:

1. Continue to comply with the following conditions set in the variance:
    a. Operate Line 31 ovens using electricity after the initial heat-up to reduce the NOx emissions.
    b. Notify the District within 48 hours when Line 33 is shut down or restarted.
    c. Notify the District at least 30 days of planned source testing for both regenerative thermal oxidizers (RTOs) and submit a source test plan.
    d. Source test both RTOs (P/O 24520; 24521) to confirm they are back in compliance with emission limits.
2. Set the term of the variance from Sept. 8, 2023, through Sept. 7, 2024.
3. New Condition – Source test Oven #2, burner #2 (P/O 25925).
4. New Condition – Submit permit modification applications for the Thermal Oxidizer as soon as practicable and no later than July 1, 2024.
5. Pay additional excess emission fees of $1375 prior to issuance of Findings and Orders

## Petitioner Address

5900 88th Street
Sacramento, California 95828

## Equipment Location

5900 88th Street
Sacramento, California 95828

## Discussion

## BACKGROUND

Mitsubishi Chemical Carbon Fiber and Composites, Inc. (Petitioner, MCCFC) produces carbon fiber and composite materials for use in a variety of applications, including aircraft, pressure vessels, and wind plates. The Petitioner operates three production lines at their Sacramento Facility, located at 5900 88th Street.

The production lines consist of oxidation ovens and furnaces that are vented to air pollution control equipment, including thermal oxidizers. Carbon fiber manufacturing emits NOx, Hydrogen Cyanide (HCN), and other pollutants. To ensure compliance with

NOx limits, the Petitioner is required to source test annually.

Events leading to issuance of Regular Variance 2023-001

On June 22, 2023, the petitioner conducted the annual source test for Carbon Fiber Manufacturing Process Product Line 33 (Permit 25918). Product Line 33 (Line 33) consists of four oxidation ovens (oven 1-4), carbonization furnaces, and end cap hoods, which vent to natural gas combustion regenerative thermal oxidizers. Two regenerative thermal oxidizers (RTO #2000, P/O 24520; RTO 1000, P/O 24521) treat the emissions from the oxidation ovens and alternate in operation to create redundant controls.

At the time of the source test, Line 33 was utilizing the regenerative thermal oxidizer (RTO) #2000 (P/O 24520.) During the source test, raw data indicated the emissions from Line 33 would pass. However, on August 21, 2023, the source testing company provided the final report to the Petitioner and informed them that while operating with RTO #2000, the Line 33 NOx emissions had exceeded permitted limits, causing Line 33 to fail the test. The Petitioner informed the District of the violation on August 21, 2023.

When Petitioner learned of the failure, Line 33 was operating RTO #1000. Initial testing with a portable analyzer by MCCFC indicated that NOx emissions for Line 33 when using RTO #1000 were below the permit limit. To ensure compliance, the petitioner contacted the source tester and planned for Line 33 to be retested on June 22, 2023 while utilizing RTO #1000. Preliminary results from the September 5, 2023 source test indicated that Line 33 emissions, when using RTO #1000, also produced NOx emissions above the permit limit. The Petitioner informed the District of the excess NOx when using either RTO. They began discussing the variance process with staff shortly thereafter and filed for a variance on September 8, 2023.

After the variance application was submitted, Line 33 was shut down for safety updates and was operated intermittently to maintain inventory. At that point, MCCFC identified cracks in the Direct Fire Thermal Oxidizer (DFTO) inlet from the furnace, defects in the RTO insulation, and lose gaskets on the RTOs. Initial repairs were made but further investigation, repair work, and testing were required to ensure all possible causes of NOx exceedance are addressed.

On October 17, 2023, the Hearing Board approved the Regular Variance 2023-001 (Regular Variance) granting the Petitioner retroactive variance relief from the date of application (September 8, 2023) through March 31, 2024, the final compliance date. The variance relief allowed them to continue to operate Line 33 at standard conditions and utilizing both RTOs. During this granted variance period, MCCFC aimed to identify and repair all potential causes of exceedance. Following repairs, MCCFC was required to source test Line 33 while utilizing both RTOs associated with Line 33.

Events subsequent to issuance of Regular Variance 2023-001

On November 14, 2023, after completing repairs to the DFTO inlet line, RTO insulation, and RTO gaskets, MCCFC tuned and source-tested its four ovens associated with Line 33, as required by the Variance conditions. Source test results for the ovens were received by the Petitioner and the District on December 19, 2023, and the results demonstrated that Oven #2 still exceeded its NOx limits. The current Order would require a passing retest of Oven #2 before March 31, 2024. On February 28, 2024, a source test of Line 33 while utilizing RTO #1000 was attempted, however preliminary results showed excess NOx and the source test was cancelled.

The Petitioner has informed the District that a number of other issues have been identified that are contributing to the continual failure of the systems. These issues include clogging of the baghouses, faulty components on Oven #2's burner, and inefficient firing in the RTOs. MCCFC has determined that baghouse clogging may lead to excess firing temperatures in the RTOs, thereby creating more NOx, so investigation into the frequent clogging and a possible change in bag media is necessary. Oven #2's burner demonstrated non-compliance with NOx limits following its source test on November 14, 2023, and Petitioner believes this issue was caused by faulty components that cause incomplete firing and excess NOx. Repairs for Oven #2 will require ordering of new parts, installation, and testing.

Following a mass balance of Line 33 to determine the NOx contribution from each emission component of the manufacturing line MCCFC determined that the RTOs were contributing the greatest amount of NOx in the line and that their NOx emissions were higher than historical data. MCCFC plans to investigate improvements to the RTOs burners and efficiency of the overall system by working with the original equipment manufacturer (OEM) of the RTOs. In addition, the Petitioner intends to pursue enhancements on the system by adding additional control equipment. These changes will require new engineering and permit applications.

The Petitioner is requesting a modification of the Regular Variance's final compliance date through September 7, 2024. The modification and extension of the final compliance date would allow MCCFC to continue to operate Line 33 at standard conditions while further repairs and improvements are completed. Source test report results typically take 30 to 60 days from the date of the source test to produce. Extending variance relief- through September 7, 2024, is necessary to allow MCCFC time to complete source tests for Line 33 with both RTOs, source test Oven #2, and for the source testing company to submit reports. Submittal of passing reports for both RTOs and Oven #2 will demonstrate a return to compliance.

**FINDING OF GOOD CAUSE**

**Under Health and Safety Code 42356, the Board may "modify or revoke, by written order, any order permitting a variance." Although not specifically stated in section 42356, the Hearing Board has historically found that an extension may be granted for good cause, similar to the 42357 standard for modification of increments of progress or final compliance dates in approved increments of progress.** *The attached Findings and Orders for Regular Variance 2023-001 contains the details on the findings for the original variance.*

**Discussion**: Following the discovery of excess NOx emissions from Line 33 and the granting of the Regular Variance, the Petitioner has demonstrated good faith efforts to return to compliance. Initial discoveries of defects in the DFTO inlet line and RTO were repaired rapidly and reported to the District. Following a delay in repair work due to safety improvements, further defects were identified, such as excess baghouse clogging and RTO inefficiencies. In addition, the Petitioner performed an initial source test of Line 33 using RTO #1000, but preliminary results showed excess NOx was still present, despite already completed repairs, and additional repairs were made prior to scheduling the source test.

Under the Regular Variance timeline, Line 33 ovens were tuned and source tested on time and as required, but the equipment failed the test. Petitioner identified faulty parts that it believed were the cause of the excess NOx from Oven #2. The applicant has informed the District that repairs and part replacements are currently in progress, as well as additional improvements to the RTO burners by working with the OEM. RTO #2000 was taken out of service due to equipment failure and isn't expected to be repaired until end of March. These repairs and testing requirements will not be completed by the current March 31, 2024 deadline.

**Excess Duration Fees**: District Rule 302 - Hearing Board Fees, requires the payment of excess duration fees for any Variance approved for more than 90 days. Hearing Board fees are calculated according to the following formula:

**# of Months of Excess Emissions X $275/Month**

The original variance was issued for 7 months. Therefore, the Petitioner was invoiced for excess emissions fees of $1100 (Invoice #2023-001-EEF):

**7 Months-3 Months (90 days) = 4 months X $$275 = $1100.**

The Petitioner is requesting to extend the variance to 12 months. Therefore, the Petitioner is required to pay 5 additional months of excess emission fees:

**5 Months of Excess Emissions X $275/Month = $1375.**

Excess Emission Fees are due before the Findings & Order may be issued but will be refunded if the Petitioner comes into compliance sooner than assumed in the fee calculation.

---

## ATTACHMENTS:

| Description | Type | Upload Date |
|---|---|---|
| Petition 2024-002 | Petitions | 3/11/2024 |
| Findings & Orders for Regular Variance 2023-001 | Supporting Documents | 3/18/2024 |
| PTO's 24520, 24521 & 25918 | Supporting Documents | 3/18/2024 |

**Approvals/Acknowledgements**

District Counsel or Designee: Kathrine Pittard, Approved as to Form 3/15/2024

Received
on Feb 14,2024
By Clerk of the Hearing Board, VM

**BEFORE THE HEARING BOARD**
**OF THE**
**SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT**

**PETITION APPLICATION**

| Petitioner's Name, Business Name, and Address | For Office Use Only |
|---|---|
| **Mitsubishi Chemical Carbon Fiber and Composites, Inc.**<br>**5900 88th Street**<br>**Sacramento, CA 95828** | Variance No. 2024-002, Modify a Final Compliance Date<br>Confirmation #<br>[X] Filing Fee Received, Receipt No: 1297788109 |
| Telephone No: **(916) 386-1733** | 30 Day Notice of Hearing Required<br>Publish Notice: 2/20/24<br>Hearing Date: 3/21/24 |

## INSTRUCTIONS

A. Please fill in the petitioner's name, business name, address, and telephone number in the above space.

B. The petitioner is (check one):

☐ Individual ☐ Partnership ☒ Corporation ☐ Other (specify)

C. Please refer to the applicable sections of the California Health & Safety Code (H&S Code) and the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District (SMAQMD) when completing the petition. The SMAQMD staff and the Business Environmental Resource Center are available to assist Small Businesses with the technical aspects of filling out this form and the development of compliance schedules.[1]

D. Please complete attached pages with thorough and documented factual responses. Review Rule 601, Procedure Before the Hearing Board, carefully to ensure the petition is complete. The petition and anything you supply in support of your petition will become part of the public record.

E. Please submit this form and filing fee to SMAQMD, 777 12th Street, Third Floor, Sacramento, California 95814. The submittal date for a petition shall be the date on the receipt issued by the District acknowledging the petitioner's full payment of the required initial fee and the newspaper publication fee (if required). After receipt, SMAQMD will notify you of the time and date of your hearing.

[1] See Health and Safety Code section 42323. The Business Environmental Resource Center's Telephone number is (916) 649-0225.

F. Please use a check mark in the ☐ to identify the type of petition being submitted and circle the appropriate fee. Fee amounts include the newspaper publishing fee (when required). Fees in parentheses are for small business as defined by Rule 302:

| **Variance Petitions** | **Fee** | |
|---|---|---|
| ☐ Interim Variance | $1,024 | ($765) |
| ☐ Short-Term Variance | $1,024 | ($765) |
| ☐ Regular Variance | $1,084 | ($825) |
| ☐ Emergency Variance | $495 | ($495) |
| **Product Variance Petitions** | | |
| ☐ Interim Product Variance | $1,024 | ($765) |
| ☐ Product Variance | $1,084 | ($825) |
| **Petition to Modify an Order Permitting a Variance** | | |
| ☐ Interim Variance | $1,084 | ($825) |
| ☐ Short-term Variance | $1,084 | ($825) |
| ☐ Regular Variance | $1,084 | ($825) |
| ☐ Interim Product Variance | $1,084 | ($825) |
| ☐ Product Variance | $1,084 | ($825) |
| **Petition to Modify Increments of Progress** | | |
| ☐ Interim Authorization—Variance | $1,024 | ($765) |
| ☐ Interim Authorization—Product Variance | $1,024 | ($765) |
| ☐ Variance | $1,024 | ($765) |
| ☐ Product Variance | $1,024 | ($765) |
| **Petition to Modify a Final Compliance Date** | | |
| ☒ Variance | $1,084 | ($825) |
| ☐ Product Variance | $1,084 | ($825) |
| **Permit Action Petition** | | |
| ☐ Review of Permit Denial | $1,084 | ($825) |
| ☐ Review of Conditional Approval | $1,084 | ($825) |
| ☐ Review of Permit Suspension | $1,084 | ($825) |
| **Other Petitions** | | |
| ☐ Rehearing of a Variance Decision | $1,084 | ($825) |
| ☐ Review of an Emission Reduction Credit Refusal | $1,084 | ($825) |
| ☐ Petition by an Aggrieved Party | $1,084 | ($825) |

G. Please enclose filing fee with each petition. Make checks payable to the **SMAQMD**. No petition will be processed unless filing fee is submitted with petition.

**In addition to the filing fee, SMAQMD may subsequently charge a petitioner a fee for staff time exceeding 7.5 hours and/or an "excess duration fee." See sections 301.2 and 301.4 of Rule 302—HEARING BOARD FEES.**

**CONTENTS OF PETITION FOR VARIANCE**
(Please type or print clearly)

1. Name, title, address, and phone number of person authorized to receive notices regarding the petition:

| Name, Title, and Address | Telephone Number |
|---|---|
| **Carley Bramhill** | **( 916 ) 379-2117** |
| **Environmental Manager** | |
| **5900 88th Street** | |
| **Sacramento, CA 95828** | |

2. Names and addresses of partners or officers:

| Name(s) | Address(es) |
|---|---|
| | |
| | |
| | |

3. Name and location of business or activity if different from #1 above:

**Not applicable**

4. Briefly describe the nature of your business:

**Carbon Fiber manufacturing facility**

5. Briefly describe the equipment which is the subject of this petition. List SMAQMD Permit Nos., indicate if equipment is exempt from Permit requirements, or answer No. 6 below:

**SMAQMD Permit No. 25918 - Carbon Fiber Manufacturing Process (Line 33), consisting of: Oxidation ovens (process emissions vented to APC thermal oxidizer, natural gas combustion thermal emissions vented directly to stack); carbonization furnaces and end cap hoods (vented to APC thermal oxider); surface treatment (vented to atmosphere); sized bath; continuous HCN monitors.**

6. I have not received permit(s) yet. My application for a Permit To Operate was submitted on

**N/A**, _____.

7. Have you been issued a Notice of Violation concerning the operation of this equipment?

☒ YES ☐ NO **NOV #12569 (not associated with this petition)**
**NOV #12805**

8. California Health and Safety Code section 41700 states:

> "Except as otherwise provided in Section 41705[2] no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

Is your company or agency (or will your company or agency be) in violation of California Health and Safety Code section 41700?

☐ YES ☒ NO

If yes, please explain:

**Not applicable**

If yes, please also attach the name(s) and address(es) of any complainant(s).

[2] Among other things, section 41705 exempts (from section 41700) odors from agricultural operations. See section 41705 for details.

9. Is your company or agency (or will your company or agency be) in violation of:

   a. California Health and Safety Code section 41701[3] or

   b. Any Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule, regulation, order, and/or Permit condition?

   If so, please explain the violation and please cite the statute, Rule, regulation, order, and/or Permit condition that is being, or will be, violated.

   **SMAQMD Permit No. 25918, Condition 10: "Emissions from [Line 33] ... must not exceed the following limits: NOx > 3.30 lb/hr."**

   **The source test report for Line 33 (test conducted 22 June 2023 and report received 21 August) indicated average NOx results calculated from 3 test runs = 3.33 lb/hr (~0.9% exceedance).**

   Please attach a copy of the pertinent Permit(s) to this petition. Remember, if any Permit or other information you supply as part of this variance petition process contains confidential information, please contact SMAQMD Office of District Counsel **before** disclosing such confidential material.

10. If you are required to comply immediately with the statute, Rule, regulation, order, or Permit condition (cited in your response to Question No. 9 above), are there conditions beyond your reasonable control that would result in any of the following situations:

    a. An arbitrary or unreasonable taking of your property; or

    b. The practical closing or elimination of a lawful business; or

    c. An unreasonable burden on a publicly owned or operated "essential public service," *i.e.*, a prison, detention facility, police or fire fighting facility, school, health care facility, landfill, gas control or processing facility, sewage treatment works, or water delivery operation?

    Please discuss the evidence supporting your conclusion:

    **Until the underlying issue has been resolved, the only way to come into immediate compliance would be to cease operation of manufacturing line 33. Shutdown would result in a severe financial hardship and could jeopardize the facility's ability to meet contractual commitments to its customers, as Line 33 manufactures specific products that the other production lines are not capable of making.**

    Please be prepared to supply documentation or other proof of your evidence to the Hearing Board or the SMAQMD staff.

[3] Among other things, section 41701 pertains to the opacity of visible air pollution such as smoke. The section specifies that emissions shall not be as dark as, or darker than, the No. 2 shade designation on a Ringelmann Chart.

11. Would the taking of property, closing or elimination of a lawful business, or unreasonable burden on an essential public service be without a corresponding benefit in reducing air contaminants?

    Please discuss your evidence:

    **Shutting the production line down would reduce emissions from the facility, but the reduction in excess emissions from the shutdown would be insignificant compared to the lost opportunity cost from not producing. Item 14 below summarizes emissions reductions from the shutdown (~0.7 lb/day NOx), while the financial loss from shutting down the line is ~$110,000 per day in operating costs.**

    **Therefore, if the variance is not granted, there would be an unreasonable burden without a corresponding benefit in reducing air contaminants.**

    Please be prepared to supply documentation or other proof of your evidence to the Hearing Board or the SMAQMD staff.

12. Please discuss the consideration your company or agency has given to:

    a. Curtailing the operation of the source in lieu of obtaining a variance, and

    b. Enacting other alternatives to the variance (besides curtailment), and

    c. Why operation curtailment or other alternatives are less desirable or feasible than seeking this variance.

    **Shutdown of the production line would cost at least $210,000 per day in lost sales revenue and would potentially put the facility at risk of breaching it's supply contracts. L-33 production capabilities are generally at one processing rate and it is not feasible or safe to dramatically reduce the processing rate. In coordination with our environmental consultants we have determined that the NOx emissions do not appreciably scale with L-33 processing rate. The performance of the thermal oxidizers and gas burners under operating conditions are the driving factor for NOx emissions. Continued operation of L-33 is required to measure NOx emissions and implement a plan to return to full compliance.**

13. During the period the variance is in effect, do you agree to monitor or otherwise quantify emission levels from the source, if requested to do so, and report these emission levels to SMAQMD pursuant to a schedule established by the District?

    ☒ YES ☐ NO

    Monitoring of emission levels is often necessary while a variance is in effect. Monitoring helps to guarantee minimal environmental consequences while a source is out of compliance with District regulations. In the absence of a monitoring program, the Hearing Board may be unable to find that a non-compliant activity will not be a public nuisance.

If you are unwilling to monitor emission levels, please explain why not and describe why your non-compliant activity will not create a public nuisance:

**Not applicable**

14. Estimate the *excess emissions* that may occur while your requested variance is in effect. *Excess emissions* are emissions of air pollutants beyond the emissions allowed by SMAQMD Rules, regulations, orders or Permit conditions. SMAQMD staff may be able to assist you with this estimate:

| **POLLUTANT(S)** (*e.g.*, VOC, $NO_X$, PM10, PM2.5, Hexavalent Chromium) | **LBS. PER DAY OF EXCESS EMISSIONS** | **NO. OF DAYS EXCESS EMISSIONS PRODUCED** | **% OPACITY** (If Applicable) |
|---|---|---|---|
| **NOx** | **0.72 lb/day** **(24 hrs x 0.03 lb/hr above permit limit)** | **< 120 days** **(excludes standard downtime for operations)** | **N/A** |
| | | | |
| | | | |
| | | | |
| | | | |

Please Note: SMAQMD will charge a petitioner an "excess duration fee" for a variance that:
- Is in effect for more than 3 months, and
- Is issued for equipment identified by SMAQMD staff report as an excess emissions source.

The excess duration fee is:
- $165 per month exceeding 3 months for small businesses, or
- $275 per month exceeding 3 months for large businesses.

See section 301.4 in Rule 302—HEARING BOARD FEES. SMAQMD will charge the "excess duration fee" following completion of the staff report for the variance. The fee is in addition to the initial filing fees collected by SMAQMD.

15. Please describe the action you will take to reduce *excess emissions* to the maximum extent feasible. If you considered a specific course of action, but excluded it as infeasible, please list the action and explain why it is infeasible.

**We will routinely monitor and adjust our thermal oxidizer process conditions to minimize the NOx emissions of L-33. We will operate the ovens #1 and 2 on L-31 on all-electric power to reduce the NOx emissions for that production line (this will not reduce the L-33 emissions, but it will reduce the site emissions). Based on 2022 source test results for L-31, ovens #1 and 2, each tested at ~0.04 - 0.05 lb/hr for NOx (~2.2 lb/day combined). Eliminating this source would more than compensate for the excess NOx we are observing on L-33.**

16. What are the advantages and disadvantages to the residents of the District from requiring compliance or resulting from granting this petition request?

The Advantages:

**Granting the variance would allow the continued operation of a lawful business that has been diligent in its efforts to comply with its permit requirements. The excess NOx emissions observed on L-33 are a small fraction (~1%) and the applicant has proposed overall site reduction of NOx emissions greater than that amount.**

**Continued operation allows for the fulfillment of customer contracts and keeps ~170 residents employed at a stable manufacturing business that has operated for 40 years.**

The Disadvantages:

**Granting the request will result in small, excess emissions of NOx from this production line.**

17. Please discuss your past diligence in complying with the applicable standards:

**MCCFC has a long history of maintaining compliance through continuous improvement, self-monitoring and reporting of breakdown conditions. Upon identification of a problem, equipment repairs, process modifications and other solutions have been implemented in a timely manner to maintain compliance. In the history of this production line, an NOV for particulate emissions has been issued and the problem was identified and repaired in a timely manner.**

18. Describe your method of achieving compliance, detailing any equipment to be installed or modifications to be made:

**Emissions from Line 33 are controlled by a system of thermal oxidizers, heat recovery, and filtration equipment.**

**Preliminary deficiencies that have been identified thus far:**

**- Cracks/air gaps in the regenerative thermal oxidizer (repaired, gaskets replaced);**
**- Crack in the direct-fired thermal oxidizer (repaired);**
**- Due to frequent clogging in the baghouse, the RTO is currently running at a higher than standard temperature (thus generating more NOx).**

**Planned actions for achieving compliance:**
**- Replacing all baghouse media to reduce clogging and allow for lower RTO operating temperature (ongoing presently);**
**- We have invited the OEM to work with us to improve the performance of abatement equipment and propose upgrades/retrofits to reduce NOx emissions. The primary area of focus is improving performance of the RTO systems. Optimally, these actions will further reduce NOx emissions and increase the buffer between the permit limit and actual operational performance (meeting scheduled for 2/14/2024 to initiate discussion).**

19. Fill in the date on which you expect to be in compliance with the rules and/or regulations:

**Objective is to have obtained evidence of return to compliance by September 2024, via 3 passing source test reports (see additional information below).**

If more than one year, attach a schedule of increments of progress, identifying the dates of each milestone. The schedule shall include, but not be limited to, the date for (a) submitting plans, (b) awarding contracts, (c) commencing construction, (d) completing construction, and (e) achieving final compliance.

NOTE: Do not overly rely on a potential future change in the law, including SMAQMD Rules and regulations, as a means of coming into compliance. The Hearing Board may not and does not control the regulatory agenda of any law-making body such as the District's Board of Directors.

---

Any Additional Information:

**Why we have not reached compliance in the time granted so far:**
**After obtaining the initial variance, we entered an extended site-wide shutdown to implement additional controls for improving process safety. These projects took precedence over all other activities, utilizing available resources and consuming the time granted by the original variance.**
**We are now able to refocus our priority to environmental performance. However, by the time the production line was restarted - and operational delays sustained for troubleshooting equipment issues arising from extended downtime - there is no longer sufficient time available to complete the three required source tests to demonstrate compliance.**

**Plan for demonstrating a return to compliance:**
**- Complete 2 of the 3 required source tests within the timeframe of the original variance (3/31/2024); results to follow, showing emissions within permitted limits:**
**- Source test main stack while utilizing RTO 1000**
**- Source test Oven 2 Burner 2**
**- If granted an extension, this will allow for the time necessary to schedule, complete, and obtain the results of the third source test – Stack emissions while utilizing RTO 2000.**

---

Any person who knowingly provides false information in this petition or any supporting documentation may be subject to penalties up to $35,000 under Health and Safety Code Section 42402.4.

**I declare under penalty of perjury that the foregoing is true and correct.**

Signature: _____

Date: Feb. 14, 2024

Name (Print): Ted Higgins

Title: General Manager

TO: Variance Petitioners DATE: January 22, 2010

FROM: Clerk of the SMAQMD Hearing Board

SUBJECT: Variance Petitions

If your business is or will be in violation of one of the Sacramento Metropolitan Air Quality Management District's (SMAQMD) rules, you may petition the SMAQMD Hearing Board for a variance. If granted, a variance will give you temporary relief from the rule requirements that are being violated. A specified amount of time will be allowed during which you must bring your business into compliance.

A petition form is enclosed. SMAQMD staff will explain the form if requested. We will also assist you in estimating excess emissions. Copies of Rule 601—PROCEDURE BEFORE THE HEARING BOARD and Rule 302—HEARING BOARD FEES are available on the District web site. Please review these documents carefully to familiarize yourself with the hearing process.

You may also use the enclosed petition to appeal the Air Pollution Control Officer's permitting decisions. For instance, if you believe your permit was incorrectly denied, you may petition the Hearing Board to make that determination.

Please be sure to review the findings that the Hearing Board must adopt when making a decision. The findings are in the petition form. IMPORTANT: You must supply the evidence in support of those findings. If the Hearing Board cannot make one of the required findings, the Hearing Board must deny the petition.

Anything that you supply in support of your petition, as well as the petition itself, will become part of the public record. If any information included in such materials is confidential information, please contact the SMAQMD Office of District Counsel **before** disclosing the confidential information.

An incomplete or inadequately documented petition or presentation at the hearing may delay the proceedings. Depending upon the complexity and nature of the situation, some petitioners use legal counsel to prepare the petition and hearing presentation.

After you submit your petition, SMAQMD must provide a public notice for the hearing. The length of notice required will depend upon the type of Hearing Board action you request. The Hearing Board has established a regular hearing schedule that is available on the District web site. **Please submit your completed petition and initial filing fee no later than the deadline shown on the schedule.** All regularly scheduled Hearing Board meetings are held in the SMAQMD conference room at 4:00 P.M.

Emergency variances necessitated by the breakdown of emission control equipment are scheduled on an as needed basis. You must contact the SMAQMD office and fill out a separate form to initiate a breakdown procedure.

Information regarding the initial filing fees is on the following pages. You may be charged fees in addition to the initial fee—per Rule 302.

If you have any questions or need assistance, please call the Clerk of the Hearing Board at (916) 874-4809.

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

# FINDINGS AND ORDERS

HEARING BOARD
SacMetro AQMD
777 12th Street, 3rd Floor
Sacramento, California 95814

**Tuesday** **October 17, 2023** **4:00 PM**

## HEARING ITEMS

1. **Petitioner**

Mitsubishi Chemical Carbon Fiber and Composites, Inc.

**Petition Number**

2023-001

**Petitioner's Address**

5900 88th Street
Sacramento, CA 95828

**Equipment Location**

5900 88th Street
Sacramento, CA958285

**Petition for**
Petitioner is requesting a Regular Variance from Rule 201, General Permit Requirements and Permit to Operate 25918, Condition No. 10, for exceeding NOx emission limits as reported on August 21, 2023. The variance request is from September 8, 2023, through March 31, 2024.

**Hearing Attendees**

Hearing Board Members

| | |
|---|---|
| Dr. Stephen Weyers, Chair & Medical Professional | Present |
| John German, Engineering Professional | Absent |
| Jonathan Ellison, Attorney | Present |
| Tim Olsen, Public Member | Present |
| Darrell Woo, Public Member | Present |

Petitioner

| | |
|---|---|
| Callum Shearer, Plant Manager | Sworn |
| Carley Bramhill, Environmental Compliance | Sworn |
| Eric Argent, Director of Technical Components | Sworn |

District Staff

Angela Thompson, Compliance Program Manager Sworn
Steven Bolton, Air Quality Specialist Sworn

Others
Kimon Manolius, Hearing Board Counsel
Virginia Muller, Clerk of the Hearing Board

**Exhibits**

1. Hearing Board Agenda with Mitsubishi Chemical, Carbon Fiber and Composites Incorporated (Petitioner, MCCFC) Item dated October 17, 2021
2. MCCFC's Powerpoint Presentation dated October 17, 2023
3. Sac Metro Air District's PowerPoint Presentation dated October 17, 2023

**HEARING**

Evidence and information in the Petition, Staff Report, and variance hearing established the facts summarized below.

MCCFC manufactures carbon fibers. It converts raw material, a high purity acrylic fiber, to carbon fiber through two basic heating processes. Beginning with an oxidation step in atmospheric ovens, the material then goes through a tar removal and carbonization process in high-temperature furnaces. After that, post-secondary processes apply surface treatment to promote resin bonding and then coat the fiber with a sizing (resin coating) to improve its handleability and cosmetic properties.

The facility has three carbon fiber production lines that manufacture continuous fiber, Lines 31, 32 and 33. Lines 31 and 32 are the original lines from the 1980s and share a main stack permit. Line 31 has two thermal oxidation ovens that can operate on either gas or electric. Line 32 is all electric. Line 33 was commissioned in 2017 and has two regenerative thermal oxidizer (RTO) ovens that run on gas only and have a separate main stack.

Line 33's Permit to Operate 25918, Condition 10 limits NOx Emissions to 3.30 pounds per hour. On August 21, 2023, MCCFC reported that Line 33 failed a source test, which showed it was emitting 3.33 lb/hr of NOx. As a result, Line 33 exceeded its permit limits by just under 1% of the NOx limit.

Line 33 is currently shut down for safety engineering upgrades not related to the NOx exceedance. While Line 33 is down, MCCFC will continue to investigate the equipment and try to determine the root cause of the excess NOx emissions. Petitioner has already found one section with cracked piping, a damaged expansion joint, and some damaged gaskets. In addition, they have found that one RTO is using more gas than the other. This indicates that somewhere the line is drawing in fresh air that significantly reduces thermal efficiency on one or two units and is contributing to increased gas usage and ultimately NOx emissions. Finally, Petitioner has located 2 cracks going into the direct fire thermal oxidizer, which is a different thermal oxidizer unit that brings in additional ambient air. This damage could also cause a higher NOx reading.

Once Line 33 is repaired and restarted, MCCFC intends to conduct additional fine-tuning of the oven burners. Then, before restarting line 33 they will further investigate the NOx exceedances. Part of this investigation includes an overall system evaluation of NOx sources to help determine whether the excess NOx is generated from the equipment or the process.

Petitioner has committed to contacting the thermal oxidizer manufacturer to see if it is possible to do some engineering upgrades on the RTOs in the event that emissions continue to exceed permitted limits after all repairs and adjustments are made.

Mitigation of Emissions

Petitioner committed to modifying operation of the ovens on Line 31 to reduce facility wide NOx during the variance period. As previously stated, Line 31 has permitted oxidation ovens that can operate either on electric or gas heating. During the variance period, Petitioner will run Line 31 on full electricity after the initial heat of the ovens, which will offset the emission flow from Line 33. Initial heat up is still required to be natural gas due to process constraints. However, once the temperature is stable, ovens will be switched to electric. By switching line 31 ovens to electric, Petitioner estimates that the majority of excess NOx emissions will be offset from the total emissions from the site.

Timeline

From the beginning of October through November, Petitioner will continue to inspect Line 33 visually, and initiate potential repairs already identified. From November through December 2023, Petitioner will perform NOx mass balance evaluations for both thermal oxidizers and processes. Petitioner plans to operate the last week of October for one production run. In November, the line will be down for a major engineering installation. Petitioner will restart production in December and continue the investigation of the root cause of exceedance.

Petitioner intends to implement all identified corrective actions during January and February of 2024. In March 2024, Petitioner will source test Line 33 twice, once with each RTO to verify a complete return to compliance. It usually takes three to four weeks to schedule a source test, but scheduling cannot commence until repairs are at or near completion. The District Permit also requires that Petitioner give the District 30-days' notice of the source test date.

Financial Impact to MCCFC of ceasing operations

MCCFC estimates the potential of $210,000 sales opportunity losses per day. Petitioner has one primary customer that has a supply contract, and other customers that buy stock as it is available. While there is some level of negotiation for not meeting contractual obligations, they may incur penalties for not meeting their primary customer's supply contract.

MCCFC'c carbon fiber is used in many applications, but mostly in sporting goods and industrial markets such as aviation and transportation. Line 33 makes one product that's only made in one place in the world. It is MCCFC's high-performance carbon fibers for pressure vessels and it goes into carbon fiber type 3 and type 4 pressure vessels for compression of natural gas and for hydrogen. This product cannot be made on Lines 31 or 32.

Petitioner has between 165 and 170 employees at the production site on 88th Street and operates a warehouse on Fruitridge Blvd for finished goods and incoming goods. In addition, this production site supports a sister site in Evanston, Wyoming. Despite the shutdown of the line, MCCFC will not be letting any employees go because they are highly skilled workers that are hard to replace.

## FINDINGS

No variance may be granted unless the Hearing Board makes the six findings set forth in Health and Safety Code section 42352(a). It is the Petitioner's burden to prove, by a preponderance of the evidence, facts sufficient to support these findings to enable the Hearing Board to grant the requested variance.

**Finding 1 - Violation**
*"That the Petitioner for a Variance is, or will be, in violation of Health and Safety Code section 41701 [opacity] or of any rule, regulation, or order of district."* (Health and Safety Code § 42352, subs. (a)(1).)

**Determination**: Petitioner is in violation of its permit conditions because it is exceeding the NOx limit on Line 33. The limit is 3.00 pounds per hour, and the source test showed it was emitting 3.33 pounds per hour. Both regenerative thermal oxidizers are violating the limit. Therefore, Petitioner is in violation of Permit 25918, Condition No. 10, for exceeding NOx limit during source test.

**Finding 2 - Reasonable Control**
*"That, due to conditions beyond the reasonable control of Petitioner, requiring compliance would result in either: (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business. In making those findings where the Petitioner is a public agency, the hearing board shall consider whether or not immediate compliance would impose an unreasonable burden on an essential public service."* (Health and Safety Code § 42352, subs. (a)(2).)

**Determination**: Petitioner does regular maintenance and, as required by the permit, performs many different regular source tests. MCCFC notified the District of the results of the failed source test quickly and shut down Line 33 on September 21, 2023. Petitioner has proven that it would suffer substantial economic harms if forced to shut down the facility while identifying and making repairs and subsequently conducting source tests to establish compliance with the permit limits. At a minimum, they will lose $210,000 per day in lost production and sales and could face penalties for not meeting contractual obligations. Furthermore, it is necessary to operate Line 33 under standard conditions to identify all needed repairs.

**Finding 3 - Relative Benefit to Air Quality**
*"That the closing or taking would be without a corresponding benefit in reducing air contaminants."* (Health and Safety Code § 42352, subs. (a)(3).)

**Determination**: MCCFC has proposed to switch Line 33 electric to offset the majority of emissions. With this switch, there will be no net increase in NOx.

**Finding 4 – Curtailment of Operations**
*"That the applicant for the Variance has given consideration to curtailing operations of the source in lieu of obtaining a Variance."* (Health and Safety Code § 42352, subs. (a)(4).

**Determination**: As previously stated, Petitioner cannot eliminate production at line 33 as they have contractual obligations. Petitioner will reduce operation to allow time for shutdowns and repairs.

**Finding 5 - Reduction of Excess Emissions**
*"During the period the variance is in effect, that the applicant will reduce excess emissions to the maximum extent feasible."* (Health and Safety Code § 42352, subs. (a).)

**Determination**: There are two issues pertaining to excess emissions: first, whether Petitioner has committed to reducing its emissions as required by the statute; and, second, whether Petitioner is obligated to pay excess emission fees in the event the Variance is granted.

1. **Control of excess emissions**: Petitioner has taken measures to curtail operations and reduce excess emissions during the proposed variance period. Production Line 33 will be switched to electricity. Petitioner also stated that there will be additional tuning of ovens that should further reduce emissions.
2. **Excess duration fees**: The second part of the reduction of excess emission is the excess duration fee. Petitioner has been in violation since June, but they're asking for relief retroactive to the date of application which would be September 8, 2023. Petitioners are required to pay excess duration fees for variances that last more than 90-days. Retroactive relief from September 8, 2023, to March 31, 2024, yields an excess duration fee of $1100.

**Finding 6 - Monitoring**
*"During the period the variance is in effect, that the applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the district, and report these emission levels to the district pursuant to a schedule established by the district."* (Health and Safety Code § 42352, subs. (a)(6).)

**Determination**: MCCFC will monitor and otherwise quantify emission levels and report them to the District during the time of the variance. Petitioner has already purchased a new analyzer that will be used to measure and record NOx during all production.

**Nuisance Finding** *"No variance shall be granted if the operation will result in a violation of Section 41700."*

**Determination**: Staff has not identified any violation of 41700 that might result from the granting of this variance.

**General Comments**: The US Environmental Protection Agency (EPA), which monitors major sources like MCCFC, has not authorized variance relief. Petitioner is on notice that the EPA could take enforcement action on this matter if it deems such an action is appropriate and that the existence of this variance does not provide a defense to any federal actions taken.

**Other Requirements** *The Hearing Board may prescribe other requirements as set forth under Health and Safety Code 42353.*

**Determination**: None required.

**Motion**
Motion to: (i) grant a Regular Variance from September 8, 2023, up to and including March 31, 2024, subject to the conditions (listed below in the Order); and, (ii) authorize the acting Chairperson to execute these Findings and Orders on behalf of the Board.

**ACTION**
*Jonathan Ellison Moved /Tim Olson Seconded*

Ayes: Ellison, Olson, Weyers, Woo

Absent: German

**Order**
Based on the above findings, IT IS HEREBY ORDERED that the Petition for Mitsubishi Carbon Fiber and Composites, Inc. (Petition No. 2023-001) for a Regular Variance from PTO 25918, condition 10, is granted from September 8, 2023, through March 31, 2024,

and that the acting Chairperson is authorized to sign the Findings and Order on behalf of the full Board. The Regular Variance is subject to the following conditions:

1. Petitioner must Operate Line 31 ovens using electricity after the initial heat-up to reduce the NOx emissions of the overall facility by 2.2 lb/day which exceeds the excess emissions from Line 33.
2. Petitioner must notify the District within two business days of a confirmed source(s) failure.
3. Petitioner must notify the District within 48 hours when Line 33 is shutdown or restarted.
4. Petitioner must provide a written plan of repair and timeline when determined within two weeks of the grant of the variance unless an extension is granted by the District staff.
5. Petitioner must notify the District at least 30 days (or ask for a reduction in notice time) of planned source testing for both regenerative thermal oxidizers (RTOs) and submit a source test plan.
6. Petitioner must source test both RTOs (P/O 24520; 24521) to confirm back in compliance with emission limits.

As stipulated above in Variance Finding 5, because the Hearing Board has granted the variance retroactively from September 8, 2023, to March 31, 2024, Petitioner must pay excess duration fees calculated by staff and currently estimated to be $1,100.

Report Approved
November 17, 2023

Dr. Stephen Weyers, Chairman of the Hearing Board

Approved as to Form November 16, 2023

Kimon Manolius, Hearing Board Counsel

**BOARD IDEAS AND COMMENTS**

Attest by Virginia Muller

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

SACRAMENTO METROPOLITAN

(916) 874-4800
FAX (916) 874-4899

AIR QUALITY
MANAGEMENT DISTRICT

# PERMIT TO OPERATE

**ISSUED TO:** **MITSUBISHI CHEMICAL CARBON FIBER & COMPOSITES, INC.**

**EQUIPMENT LOCATION:** **5900 88TH STREET, SACRAMENTO, CA 95828**

| PERMIT NO. | EQUIPMENT DESCRIPTION |
|---|---|
| 24520 | AIR POLLUTION CONTROL EQUIPMENT CONSISTING OF:<br>A. REGENERATIVE THERMAL OXIDIZER (RTO 1000), MAKE: ANGUIL, MODEL: RTO-200, SERIAL NUMBER: 18411-1000, 4.6 MMBTU/HR, NATURAL GAS FIRED, VENTED TO APC BAGHOUSE (P/O 24522).<br>B. EXHAUST SYSTEM SERVING P/O 24520 AND P/O 24521, EQUIPED WITH REDUNDANT BLOWERS (2), 19,000 SCFM EACH, 250 HP EACH, VENTING THE PROCESS AREAS OF THE OXIDATION OVENS (P/O 24611, 24612, 24613, AND 24614) AND THE LOW TEMPERATURE AND HIGH TEMPERATURE FURNACES END CAPS IN CARBON FIBER MANUFACTURING PROCESS LINE 33 (P/O 24518). |

## SUBJECT TO THE FOLLOWING CONDITIONS:

### GENERAL

1. The permit holder agrees to indemnify and defend SMAQMD, its officers, agents, and employees if this permit or CEQA or NEPA is challenged in state or federal court. This indemnification includes attorney fees awarded against SMAQMD, as well as attorney fees, court costs, legal fees, and other expenses incurred in defending the challenge. The District will provide written notice to the permit holder within 5 days if it receives a petition, complaint or other legal notice by a third party challenging this Permit to Operate or CEQA or NEPA. The permit holder may, within 10 days of notification, request cancellation of the Permit to Operate. If the permit holder requests cancellation, SMAQMD will cancel the permit within 5 days, and will notify the plaintiffs of the cancellation and request dismissal of the litigation.
**[Basis: SMAQMD Rule 201, Section 405]**

2. The equipment must be properly maintained and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.1]**

ALBERTO AYALA, PH.D., M.S.E.
AIR POLLUTION CONTROL OFFICER

**DATE ISSUED:** 10-25-2019
**DATE EXPIRES:** 10-24-2020 (UNLESS RENEWED)

BY: _____



**REVOCABLE AND NON-TRANSFERABLE**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899



3. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:
   A. Enter the source premises or any location which any records required by this Permit to Operate are kept.
   B. Access and copy any records required by this Permit to Operate.
   C. Inspect or review any equipment, operation, or method required under this Permit to Operate.
   D. Sample emissions from the source or require samples to be taken.
   **[Basis: SMAQMD Rule 201, Section 405]**

4. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the SMAQMD Rules and Regulations.
   **[Basis: SMAQMD Rule 201, Sections 303.1, 405]**

5. The facility may not discharge air contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
   **[Basis: SMAQMD Rule 402, Section 301]**

6. A legible copy of this Permit to Operate must be maintained on the premises with the equipment.
   **[Basis: SMAQMD Rule 201, Section 401]**

**EMISSIONS LIMITATIONS**

7. The APC RTO must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour if the discharge is as dark or darker than Ringelmann No. 1 or is equal to or greater than 20% opacity.
   **[Basis: SMAQMD Rule 401, Section 301]**

8. The burner of the APC RTO must meet the following emission standards:
   **[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

| Pollutant | Emission Standard and Work Practice |
|---|---|
| NOx | 60 ppmvd corrected to 3% oxygen (A) |
| CO | 400 ppmvd corrected to 3% oxygen (B) |

(A) Based on SMAQMD BACT standard for this equipment category.
(B) Applicant proposed emission standard.

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899



9. The combustion emissions from the APC RTO must not exceed the following limits:
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

| Pollutant | Emission Factors (A) (lb/MMcf) | Emission Limits (B) | | |
|---|---|---|---|---|
| | | (lb/day) | (lb/quarter) | (lb/year) |
| VOC | 5.4 | 0.6 | 55 | 218 |
| NOx | 72.9 | 8.0 | 740 | 2,938 |
| SOx | 0.6 | 0.1 | 6 | 24 |
| PM10 | 7.5 | 0.8 | 76 | 302 |
| PM2.5 | 7.5 | 0.8 | 76 | 302 |
| CO | 295.8 | 32.7 | 3,004 | 11,920 |

(A) Emission factors for VOC, SOx, and PM10, and are from AP-42, Table 1.4-1 and 1.4-2 (7/98) using an HHV of 1000 btu/scf. Emission factors for NOx and CO are based on 60 ppmvd and 400 ppmvd at 3% oxygen respectively.

(B) Burner emissions are based on 4.6 MMbtu/hr, 24 hours/day, 92 days/quarter, 365 days/year, and the emission factors in this table. Emissions represent only the emissions from the burner and do not include process emissions which are included in P/O 24518.

**EQUIPMENT OPERATION**

10. The APC RTO burner must be fired only on pipeline-quality natural gas.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

11. The operating temperature in the APC RTO must be at least 1550 °F (843 °C) (based on the operating set point temperature of 1550 °F (843 °C) to 1700 °F (927 °C)) averaged over any one hour period and a residence time of at least 0.3 seconds.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

12. Temperature measuring equipment must be properly installed and maintained to monitor the temperature in the RTO. In the event of a digital temperature recorder failure, manual 15-minute temperature recordkeeping is allowed. Manual recordkeeping must not exceed five (5) time periods per calendar year and each period must not exceed 24 hours.
**[Basis: SMAQMD Rule 201, Section 405]**

13. The APC RTO must be vented to the APC Baghouse (P/O 24522) at all times.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

14. The APC RTO must be operated and maintained in accordance with the latest approved Operation and Maintenance Plan.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**EMISSIONS TESTING**

15. Emissions of Nitrogen Oxides, Carbon Monoxide, and Oxygen must be tested for the burner annually to verify compliance with Condition No. 8.
    A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the test is to be performed.
    B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of test if the date has changed from that approved in the source test plan.
    C. During source testing, the burner must be operated at a firing rate that is as close as physically possible to the rated capacity.
    D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s.)
    **[Basis: SMAQMD Rule 201, Section 405]**

16. Emission testing methods must be those specified below unless a modification is approved in advance by the Air Pollution Control Officer.
    A. Oxides of Nitrogen – ARB Method 100 or EPA Method 7E.
    B. Carbon Monoxide – ARB Method 100 or EPA Method 10.
    C. Stack gas Oxygen – ARB Method 100 or EPA Method 3A.
    D. Carbon Dioxide – ARB Method 100 or EPA Method 3A.
    **[Basis: SMAQMD Rule 201, Section 405]**

17. In lieu of the test methods required by Condition No. 16, emission testing of the burners may be performed using a hand-held portable analyzer provided compliance with the following:
    A. Notify the Air Pollution Control Officer at least 30 days prior to the test date of the date and time of the test.
    B. Notwithstanding the non-applicability of Rule 411 to the equipment, test equipment must comply with Rule 411, Attachment B. Emission readings must either be averaged over a 15 minute test period or 5 evenly spaced readings may be taken over a 15 minute test interval.
    C. if the results from the portable analyzer test show that NOx emissions exceed the limits specified in Condition No. 8, the burner must be source tested no later than 60 days from the date of discovery of the exceedance.
    **[Basis: SMAQMD Rule 201, Section 405]**

**RECORD KEEPING AND REPORTING**

18. Emission test reports for the APC RTO must be maintained on-site and made available to the Air Pollution Control Officer upon request.
    **[Basis: SMAQMD Rule 201, Section 405]**

19. The following records must be continuously maintained onsite for the most recent five year period and must be made available to the Air Pollution Control Officer upon request.
    **[Basis: SMAQMD Rule 201, Section 405]**



**REVOCABLE AND NON-TRANSFERABLE**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

| Frequency | Information to be Recorded |
|---|---|
| At all times | A. Record of APC RTO temperature (one hour rolling average) (°F or °C).<br>B. All records specified in the approved APC RTO Operation and Maintenance Plan. |

20. An Operations and Maintenance Plan (O&M Plan) must be maintained on-site at all times. The O&M Plan must include the following information:
    A. Operation and maintenance procedure to demonstrate continuous operation of the emission control device during periods of emissions-producing operations. This must include key operating parameters such as temperature, pressure and/or flow rate.
    B. Records that document compliance with these operation and maintenance procedures.
    **[Basis: SMAQMD Rule 201, Section 405]**

21. The permit holder must, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).
    **[Basis: SMAQMD Rule 201, Section 303.1]**

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

| SMAQMD RULE NO. | RULE TITLE |
|---|---|
| 201 | GENERAL PERMIT REQUIREMENTS (08-24-2006) |
| 202 | NEW SOURCE REVIEW (08-23-2012) |
| 207 | FEDERAL OPERATING PERMIT PROGRAM (7-28-11) |
| 214 | FEDERAL NEW SOURCE REVIEW ((8-23-12) |
| 217 | PUBLIC NOTICE REQUIREMENTS FOR PERMITS (8-23-12) |
| 401 | RINGELMANN CHART (04-19-1983) |
| 402 | NUISANCE (08-03-1977) |
| 406 | SPECIFIC CONTAMINANTS (12-06-1978) |
| 420 | SULFUR CONTENT OF FUELS (08-13-1981) |

The conditions on this Permit to Operate reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



**REVOCABLE AND NON-TRANSFERABLE**

# ATTACHMENT A

# P/O 24520

Operation and Maintenance Plan

MITSUBISHI RAYON
CARBON FIBER & COMPOSITES

CARBON FIBER DIVISION
5[illegible]3TH STREET, SACRAMENTO, CA 95828-1109, USA
TEL: +1 916.386.1733 | FAX: +1 916.383.7668 | WWW.MRCFAC.COM

**Version Date: September 26, 2016**

# Line 33, RTO-1 and RTO-2 Operation and Maintenance Plan

## 1.0 Background

Regarding Line 33, there are two identical Regenerative Thermal Oxidizer (RTO) units installed. They are referred to as RTO-1 (A/C 24520) and RTO-2 (A/C 24521). The RTO's are redundant equipment and will not be operated simultaneously. There will be one RTO unit in continuous operation at all times during periods of emissions-producing operations. This can be either RTO-1 or RTO-2. The "other" RTO will be OFF and isolated from emission sources when not in-use.

## 2.0 Operation and Measurements

During operation, the RTO will treat exhaust gasses from the process areas of the oxidation ovens, and the low temperature and high temperature furnaces end cap vents.

### RTO Operation

- Line 33 ovens 1 through 4 and LTF/HTF end cap vents, anticipated exhaust flow rate = 15,550 scfm.
- RTO bed volume = 896 $ft^3$ (for media bed), 1696 $ft^3$ (for media bed and burner zone).
- Expected RTO residence time = 2.5 seconds.
- Expected RTO inlet temperature = 160°C.
- Expected RTO outlet temperature = 260°C.
- Operating Temperature = 844°C (minimum) in the heating chamber (media beds).
- Heating / cooling chamber cycle will occur every three minutes.

### RTO Measurements

- Sampling ports at the inlet and outlet of the RTO with allow for direct measurements of mass flow rate and VOC concentration (including HCN).
- A totalizing natural gas fuel flow meter will monitor the RTO fuel usage.
- The RTO inlet and outlet exhaust stream temperatures will be monitored to determine thermal efficiency.
- The differential pressure across the RTO media bed will be monitored to indicate degree of plugging.

CARBON FIBER DIVISION
8TH STREET, SACRAMENTO, CA 95828-1109, USA
TEL: +1 916.386.1733 | FAX: +1 916.383.7663 | WWW.MRCFAC.COM

## 3.0 Maintenance

The ceramic media beds will be prone to plugging from the silica generated from the Line 33 process. As the plugging increases with time, the pressure drop through the unit will increase and eventually some, or all, of the ceramic media will need to be replaced.

During the cleaning and maintenance of the applicable RTO, the production line will operate using the secondary RTO.

## 4.0 Record Keeping

The following records will be kept:

- Hourly operating temperature of the media beds;
- Hourly natural gas consumption;
- VOC concentration at inlet and outlet of the RTO (minimum monthly non-continuous sampling);
- Hourly pressure drop across the media beds; and
- Dates of media bed cleaning operations.
- Calibration records of the pressure transducers.

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

SACRAMENTO METROPOLITAN

(916) 874-4800
FAX (916) 874-4899

AIR QUALITY
MANAGEMENT DISTRICT

# PERMIT TO OPERATE

**ISSUED TO:** **MITSUBISHI CHEMICAL CARBON FIBER & COMPOSITES, INC.**

**EQUIPMENT LOCATION:** **5900 88TH STREET, SACRAMENTO, CA 95828**

| PERMIT NO. | EQUIPMENT DESCRIPTION |
|---|---|
| 24521 | AIR POLLUTION CONTROL EQUIPMENT CONSISTING OF:<br>A. REGENERATIVE THERMAL OXIDIZER (RTO 2000), MAKE: ANGUIL, MODEL: RTO-200, SERIAL NUMBER: 18411-2000, 4.6 MMBTU/HR, NATURAL GAS FIRED, VENTED TO APC BAGHOUSE (P/O 24522).<br>B. EXHAUST SYSTEM SERVING P/O 24520 AND P/O 24521, EQUIPED WITH REDUNDANT BLOWERS (2), 19,000 SCFM EACH, 250 HP EACH, VENTING THE PROCESS AREAS OF THE OXIDATION OVENS (P/O 24611, 24612, 24613, AND 24614) AND THE LOW TEMPERATURE AND HIGH TEMPERATURE FURNACES END CAPS IN CARBON FIBER MANUFACTURING PROCESS LINE 33 (P/O 24518). |

## SUBJECT TO THE FOLLOWING CONDITIONS:

### GENERAL

1. The permit holder agrees to indemnify and defend SMAQMD, its officers, agents, and employees if this permit or CEQA or NEPA is challenged in state or federal court. This indemnification includes attorney fees awarded against SMAQMD, as well as attorney fees, court costs, legal fees, and other expenses incurred in defending the challenge. The District will provide written notice to the permit holder within 5 days if it receives a petition, complaint or other legal notice by a third party challenging this Permit to Operate or CEQA or NEPA. The permit holder may, within 10 days of notification, request cancellation of the Permit to Operate. If the permit holder requests cancellation, SMAQMD will cancel the permit within 5 days, and will notify the plaintiffs of the cancellation and request dismissal of the litigation.
**[Basis: SMAQMD Rule 201, Section 405]**

2. The equipment must be properly maintained and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.1]**

**DATE ISSUED:** 10-25-2019
**DATE EXPIRES:** 10-24-2020 (UNLESS RENEWED)

ALBERTO AYALA, PH.D., M.S.E.
AIR POLLUTION CONTROL OFFICER

BY: _____



**REVOCABLE AND NON-TRANSFERABLE**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899



3. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:
   A. Enter the source premises or any location which any records required by this Permit to Operate are kept.
   B. Access and copy any records required by this Permit to Operate.
   C. Inspect or review any equipment, operation, or method required under this Permit to Operate.
   D. Sample emissions from the source or require samples to be taken.
   **[Basis: SMAQMD Rule 201, Section 405]**

4. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the SMAQMD Rules and Regulations.
   **[Basis: SMAQMD Rule 201, Sections 303.1, 405]**

5. The facility may not discharge air contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
   **[Basis: SMAQMD Rule 402, Section 301]**

6. A legible copy of this Permit to Operate must be maintained on the premises with the equipment.
   **[Basis: SMAQMD Rule 201, Section 401]**

**EMISSIONS LIMITATIONS**

7. The APC RTO must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour if the discharge is as dark or darker than Ringelmann No. 1 or is equal to or greater than 20% opacity.
   **[Basis: SMAQMD Rule 401, Section 301]**

8. The burner of the APC RTO must meet the following emission standards:
   **[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

| Pollutant | Emission Standard and Work Practice |
|---|---|
| NOx | 60 ppmvd corrected to 3% oxygen (A) |
| CO | 400 ppmvd corrected to 3% oxygen (B) |

(A) Based on SMAQMD BACT standard for this equipment category.
(B) Applicant proposed emission standard.

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

9. The combustion emissions from the APC RTO must not exceed the following limits:
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

| Pollutant | Emission Factors (A) (lb/MMcf) | Emission Limits (B) | | |
|---|---|---|---|---|
| | | (lb/day) | (lb/quarter) | (lb/year) |
| VOC | 5.4 | 0.6 | 55 | 218 |
| NOx | 72.9 | 8.0 | 740 | 2,938 |
| SOx | 0.6 | 0.1 | 6 | 24 |
| PM10 | 7.5 | 0.8 | 76 | 302 |
| PM2.5 | 7.5 | 0.8 | 76 | 302 |
| CO | 295.8 | 32.7 | 3,004 | 11,920 |

(A) Emission factors for VOC, SOx, and PM10, and are from AP-42, Table 1.4-1 and 1.4-2 (7/98) using an HHV of 1000 btu/scf. Emission factors for NOx and CO are based on 60 ppmvd and 400 ppmvd at 3% oxygen respectively.

(B) Burner emissions are based on 4.6 MMbtu/hr, 24 hours/day, 92 days/quarter, 365 days/year, and the emission factors in this table. Emissions represent only the emissions from the burner and do not include process emissions which are included in P/O 24518.

**EQUIPMENT OPERATION**

10. The APC RTO burner must be fired only on pipeline-quality natural gas.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

11. The operating temperature in the APC RTO must be at least 1550 °F (843 °C) (based on the operating set point temperature of 1550 °F (843 °C) to 1700 °F (927 °C)) averaged over any one hour period and a residence time of at least 0.3 seconds.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

12. Temperature measuring equipment must be properly installed and maintained to monitor the temperature in the RTO. In the event of a digital temperature recorder failure, manual 15-minute temperature recordkeeping is allowed. Manual recordkeeping must not exceed five (5) time periods per calendar year and each period must not exceed 24 hours.
**[Basis: SMAQMD Rule 201, Section 405]**

13. The APC RTO must be vented to the APC Baghouse (P/O 24522) at all times.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**

14. The APC RTO must be operated and maintained in accordance with the latest approved Operation and Maintenance Plan.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408]**



**REVOCABLE AND NON-TRANSFERABLE**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**EMISSIONS TESTING**

15. Emissions of Nitrogen Oxides, Carbon Monoxide, and Oxygen must be tested for the burner annually to verify compliance with Condition No. 8.
    A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the test is to be performed.
    B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of test if the date has changed from that approved in the source test plan.
    C. During source testing, the burner must be operated at a firing rate that is as close as physically possible to the rated capacity.
    D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s.)
    **[Basis: SMAQMD Rule 201, Section 405]**

16. Emission testing methods must be those specified below unless a modification is approved in advance by the Air Pollution Control Officer.
    A. Oxides of Nitrogen – ARB Method 100 or EPA Method 7E.
    B. Carbon Monoxide – ARB Method 100 or EPA Method 10.
    C. Stack gas Oxygen – ARB Method 100 or EPA Method 3A.
    D. Carbon Dioxide – ARB Method 100 or EPA Method 3A.
    **[Basis: SMAQMD Rule 201, Section 405]**

17. In lieu of the test methods required by Condition No. 16, emission testing of the burners may be performed using a hand-held portable analyzer provided compliance with the following:
    A. Notify the Air Pollution Control Officer at least 30 days prior to the test date of the date and time of the test.
    B. Notwithstanding the non-applicability of Rule 411 to the equipment, test equipment must comply with Rule 411, Attachment B. Emission readings must either be averaged over a 15 minute test period or 5 evenly spaced readings may be taken over a 15 minute test interval.
    C. if the results from the portable analyzer test show that NOx emissions exceed the limits specified in Condition No. 8, the burner must be source tested no later than 60 days from the date of discovery of the exceedance.
    **[Basis: SMAQMD Rule 201, Section 405]**

**RECORD KEEPING AND REPORTING**

18. Emission test reports for the APC RTO must be maintained on-site and made available to the Air Pollution Control Officer upon request.
    **[Basis: SMAQMD Rule 201, Section 405]**

19. The following records must be continuously maintained onsite for the most recent five year period and must be made available to the Air Pollution Control Officer upon request.
    **[Basis: SMAQMD Rule 201, Section 405]**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

| Frequency | Information to be Recorded |
|---|---|
| At all times | A. Record of APC RTO temperature (one hour rolling average) (°F or °C).<br>B. All records specified in the approved APC RTO Operation and Maintenance Plan. |

20. An Operations and Maintenance Plan (O&M Plan) must be maintained on-site at all times. The O&M Plan must include the following information:
    A. Operation and maintenance procedure to demonstrate continuous operation of the emission control device during periods of emissions-producing operations. This must include key operating parameters such as temperature, pressure and/or flow rate.
    B. Records that document compliance with these operation and maintenance procedures.
    **[Basis: SMAQMD Rule 201, Section 405]**

21. The permit holder must, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).
    **[Basis: SMAQMD Rule 201, Section 303.1]**

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

| SMAQMD RULE NO. | RULE TITLE |
|---|---|
| 201 | GENERAL PERMIT REQUIREMENTS (08-24-2006) |
| 202 | NEW SOURCE REVIEW (08-23-2012) |
| 207 | FEDERAL OPERATING PERMIT PROGRAM (7-28-11) |
| 214 | FEDERAL NEW SOURCE REVIEW ((8-23-12) |
| 217 | PUBLIC NOTICE REQUIREMENTS FOR PERMITS (8-23-12) |
| 401 | RINGELMANN CHART (04-19-1983) |
| 402 | NUISANCE (08-03-1977) |
| 406 | SPECIFIC CONTAMINANTS (12-06-1978) |
| 420 | SULFUR CONTENT OF FUELS (08-13-1981) |

The conditions on this Permit to Operate reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



**REVOCABLE AND NON-TRANSFERABLE**

# ATTACHMENT A

# P/O 24521

Operation and Maintenance Plan

MITSUBISHI RAYON
CARBON FIBER & COMPOSITES

CARBON FIBER DIVISION
[redacted] 8TH STREET, SACRAMENTO, CA 95828-1109, USA
TEL: +1 916.386.1733 | FAX: +1 916.383.7668 | WWW.MRCFAC.COM

**Version Date: September 26, 2016**

# Line 33, RTO-1 and RTO-2 Operation and Maintenance Plan

## 1.0 Background

Regarding Line 33, there are two identical Regenerative Thermal Oxidizer (RTO) units installed. They are referred to as RTO-1 (A/C 24520) and RTO-2 (A/C 24521). The RTO's are redundant equipment and will not be operated simultaneously. There will be one RTO unit in continuous operation at all times during periods of emissions-producing operations. This can be either RTO-1 or RTO-2. The "other" RTO will be OFF and isolated from emission sources when not in-use.

## 2.0 Operation and Measurements

During operation, the RTO will treat exhaust gasses from the process areas of the oxidation ovens, and the low temperature and high temperature furnaces end cap vents.

### RTO Operation

- Line 33 ovens 1 through 4 and LTF/HTF end cap vents, anticipated exhaust flow rate = 15,550 scfm.
- RTO bed volume = 896 $ft^3$ (for media bed), 1696 $ft^3$ (for media bed and burner zone).
- Expected RTO residence time = 2.5 seconds.
- Expected RTO inlet temperature = 160°C.
- Expected RTO outlet temperature = 260°C.
- Operating Temperature = 844°C (minimum) in the heating chamber (media beds).
- Heating / cooling chamber cycle will occur every three minutes.

### RTO Measurements

- Sampling ports at the inlet and outlet of the RTO with allow for direct measurements of mass flow rate and VOC concentration (including HCN).
- A totalizing natural gas fuel flow meter will monitor the RTO fuel usage.
- The RTO inlet and outlet exhaust stream temperatures will be monitored to determine thermal efficiency.
- The differential pressure across the RTO media bed will be monitored to indicate degree of plugging.

CARBON FIBER DIVISION
,8TH STREET, SACRAMENTO, CA 95828-1109, USA
TEL: +1 916.386.1733 | FAX: +1 916.383.7668 | WWW.MRCFAC.COM

## 3.0 Maintenance

The ceramic media beds will be prone to plugging from the silica generated from the Line 33 process. As the plugging increases with time, the pressure drop through the unit will increase and eventually some, or all, of the ceramic media will need to be replaced.

During the cleaning and maintenance of the applicable RTO, the production line will operate using the secondary RTO.

## 4.0 Record Keeping

The following records will be kept:

- Hourly operating temperature of the media beds;
- Hourly natural gas consumption;
- VOC concentration at inlet and outlet of the RTO (minimum monthly non-continuous sampling);
- Hourly pressure drop across the media beds; and
- Dates of media bed cleaning operations.
- Calibration records of the pressure transducers.

777 12TH STREET, STE. 300
SACRAMENTO, CA 95814-1908

(279) 207-1122
(800) 880-9025

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

# PERMIT TO OPERATE

**ISSUED TO:** **MITSUBISHI CHEMICAL CARBON FIBER & COMPOSITES, INC.**

**EQUIPMENT LOCATION:** **5900 88TH STREET, SACRAMENTO, CA 95828**

| PERMIT NO. | EQUIPMENT DESCRIPTION |
|---|---|
| 25918 | CARBON FIBER MANUFACTURING PROCESS (LINE 33) CONSISTING OF:<br>A. OXIDATION OVENS (P/O 24611, P/O 25925, P/O 24613, AND P/O 24614), PROCESS EMISSIONS VENTED TO APC THERMAL OXIDIZER (P/O 24520 OR P/O 24521), NATURAL GAS COMBUSTION EMISSIONS VENTED DIRECTLY TO STACK.<br>B. LOW TEMPERATURE FURNACE (1), 520 KW, ELECTRICALLY HEATED, VENTED TO APC THERMAL OXIDIZER (P/O 24519)<br>C. HIGH TEMPERATURE FURNACE (1), 675 KW, ELECTRICALLY HEATED, VENTED TO APC THERMAL OXIDIZER (P/O 24519)<br>D. ELECTROLYTE SURFACE TREATMENT BATH, VENTED TO ATMOSPHERE<br>E. SURFACE TREATED FIBER DRYER<br>F. SIZED BATH<br>G. SIZED BATH DRYER<br>H. SIZED MAKE-UP FACILITY<br>I. LOW TEMPERATURE FURNACE END CAP HOODS (2) AND HIGH TEMPERATURE FURNACE END CAP HOODS (2) VENTED TO APC THERMAL OXIDIZER (P/O 24520 OR P/O 24521)<br>J. CONTINUOUS EMISSION MONITORS (2), ONE PRIMARY AND ONE STANDBY, MONITORING HYDROGEN CYANIDE (HCN) EMISSIONS, LOCATED IN LINE 33 MAIN STACK AND LINE 33 AIR DUCTING. |

ALBERTO AYALA, PH.D., M.S.E.
AIR POLLUTION CONTROL OFFICER

**DATE ISSUED:** 07-21-2020
**DATE EXPIRES:** 10-24-2022 (UNLESS RENEWED)

BY: *Brian F Krebs*



**REVOCABLE AND NON-TRANSFERABLE**

777 12TH STREET, STE. 300
SACRAMENTO, CA 95814-1908

(279) 207-1122
(800) 880-9025

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

## SUBJECT TO THE FOLLOWING CONDITIONS:

### GENERAL

1. The permit holder will indemnify and defend SMAQMD, its officers, agents, and employees if this permit, or the environmental review of the permit under CEQA (including exemption determinations), is challenged through a legal action. This indemnification includes attorney fees awarded against SMAQMD, as well as attorney fees, court costs, legal fees, and other expenses incurred in defending the challenge. The District will provide written notice to the permit holder within 5 days if it receives a petition, complaint or other legal notice by a third party challenging this Authority to Construct or the environmental review of the Authority to Construct under the California Environmental Quality Act (including exemption determinations). The permit holder may, within 10 days of notification, request cancellation of the Authority to Construct. If the permit holder requests cancellation, within 5 days SMAQMD will cancel the permit, notify the plaintiffs of the cancellation, and request dismissal of the litigation.
   **[Basis: SMAQMD Rule 201, Section 405]**

2. The equipment must be properly maintained and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.
   **[Basis: SMAQMD Rule 201, Section 405, Rule 202, Section 408.1, and Rule 214, Section 408.1**

3. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:
   A. Enter the source premises or any location which any records required by this Permit to Operate are kept.
   B. Access and copy any records required by this Permit to Operate.
   C. Inspect or review any equipment, operation, or method required under this Permit to Operate.
   D. Sample emissions from the source or require samples to be taken.
   **[Basis: SMAQMD Rule 201, Section 405]**

4. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the SMAQMD Rules and Regulations.
   **[Basis: SMAQMD Rule 201, Sections 303.1, 405]**

5. The facility may not discharge air contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
   **[Basis: SMAQMD Rule 402, Section 301]**

6. A legible copy of this Permit to Operate must be maintained on the premises with the equipment.
   **[Basis: SMAQMD Rule 201, Section 401]**



**REVOCABLE AND NON-TRANSFERABLE**

**EMISSIONS LIMITATIONS**

7. The manufacturing process must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour which is as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.
**[Basis: SMAQMD Rule 401, Section 301]**

8. The manufacturing process must meet the following BACT standards:
A. Ovens and furnaces must vent to thermal oxidizers with a ≥ 0.3 sec retention time at ≥ 1400 ºF (760 ºC).
B. Ovens and furnaces must be fired using natural gas fuel or electrically heated for the control of SOx.
C. PM10 and PM2.5 must be controlled by a baghouse with a minimum control efficiency of 97%.
**[Basis: SMAQMD Rule 202, Section 408 and Rule 214, Section 408**

9. The manufacturing process must comply with T-BACT which is the venting of toxics to a thermal oxidizer with a minimum control of 99% of toxics and to a baghouse of woven glass bags with a minimum control of 97% of particulate matter.
**[Basis: SMAQMD Rule 402, Section 301]**

10. Emissions from the carbon fiber manufacturing process line (P/O 25918), the direct-fired thermal oxidizer (P/O 24519), and the regenerative thermal oxidizers (P/O 24520 or P/O 24521) combined must not exceed the following limits. The hourly limit is an average over a three hour period.
**[Basis: SMAQMD Rule 201, Section 405, Rule 202, Section 408, and Rule 214, Section 408]**

| Pollutant | Emissions Limit (A) Carbon Fiber Manufacturing Process Line 33 | | |
|---|---|---|---|
| | (lb/hour) | (lb/day) | (lb/year) |
| VOC | 1.24 | 29.8 | 10,862 |
| NOx | 3.30 | 79.2 | 28,907 |
| SOx | 3.00 | 72.0 | 26,280 |
| PM10 | 2.43 | 58.3 | 21,286 |
| PM2.5 | 2.43 | 58.3 | 21,286 |
| CO | 10.54 | 253.0 | 92,329 |
| HCN | 2.27 | 54.5 | 18,363 |

(A) Hourly emissions for VOC, NOx, SOx, PM10, PM2.5, and CO are based on engineering judgment and process experience from manufacturing lines 31 and 32. Daily emissions are based on 24 hours/day. Annual emissions are based on quarterly emissions from Condition No. 11. Hourly emission of Hydrogen Cyanide (HCN) are based on a stack concentration of 20 ppm HCN at a flow rate of 27,000 dscfm. Daily emissions of HCN are based on the hourly limit for 24 hours/day. Annual emissions of HCN are based on the applicant's request.

11. Quarterly emissions from the carbon fiber manufacturing process line (P/O 25918), the direct-fired thermal oxidizer (P/O 24519), and the regenerative thermal oxidizers (P/O 24520 or P/O 24521) combined must not exceed the following limits:
**[Basis: SMAQMD Rule 202, Section 408 and Rule 214, Section 408]**

| Pollutant | Emissions Limit (A) Carbon Fiber Manufacturing Process Line 33 (lb/quarter) | | | |
|---|---|---|---|---|
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| VOC | 2,678 | 2,708 | 2,738 | 2,738 |
| NOx | 7,128 | 7,207 | 7,286 | 7,286 |
| SOx | 6,480 | 6,552 | 6,624 | 6,624 |
| PM10 | 5,249 | 5,307 | 5,365 | 5,365 |
| PM2.5 | 5,249 | 5,307 | 5,365 | 5,365 |
| CO | 22,766 | 23,019 | 23,272 | 23,272 |

(A) Emissions are based on the hourly emissions from Condition No. 10; 24 hour/day; and 90 days/quarter, 91 days/quarter, 92 days/quarter, and 92 days/quarter for each sequential quarter.

12. Hydrogen cyanide (HCN) emissions in the Line 33 main exhaust stack of the carbon fiber manufacturing process line, as measured by the continuous HCN emission monitor, must not exceed the following limit:
**[Basis: SMAQMD Rule 201, Section 405 and Rule 402, Section 301]**

| Pollutant | Maximum Allowable Emission Concentration (A) (ppmv) |
|---|---|
| Hydrogen Cyanide (HCN) | 20 |

(A) Concentration averaged over a period of one hour as shown on the digital chart recorder.

**EQUIPMENT OPERATION**

13. The precursor processing rate for the carbon fiber manufacturing process line must be limited to the precursor processing rate divided by 0.9 that the carbon fiber manufacturing process line was operating at during the most recent compliance source test where compliance with the VOC, NOx, PM10, PM2.5, and CO emission rates outlined in Condition No. 10 was demonstrated. The precursor processing rate must be determined as follows:

Precursor Processing Rate (kg/hr) = Line Speed * ∑(Number of Filaments per End * Decitex * Number of Ends) * E-07

where: Line Speed is expressed as meters/hour
Decitex = weight in grams of a single, 10,000 meter filament
**[Basis: SMAQMD Rule 201, Section 405]**

14. Notwithstanding the precursor processing rate methodology given in Condition No. 13, the maximum precursor processing rate that is established during the compliance source test must not result in an exceedance of the emission limits given in Condition Nos. 10 and 11.
**[Basis: SMAQMD Rule 201, Section 405]**

15. The line speed meter and associated digital chart recorder must be maintained to monitor and record precursor process rates when the process is in operation. In the event of a digital chart recorder failure, manual hourly line speed recordkeeping is allowed. Manual recordkeeping must not exceed five (5) time periods per calendar year and each period must not exceed 24 hours.
**[Basis: SMAQMD Rule 201, Section 405]**

16. The primary continuous HCN emission monitor must be operated whenever the carbon fiber manufacturing process is in operation except as allowed by Attachment A (HCN Monitor Maintenance and Calibration). The HCN monitor must be maintained and properly calibrated. Mitsubishi Chemical Carbon Fiber and Composites, Inc. must follow the HCN monitor maintenance and calibration schedule per Attachment A. The HCN monitor maintenance and calibration schedule must be approved by the Air Pollution Control Officer. In the event of a digital recorder failure of the continuous HCN emission monitor, manual 15-minute HCN concentration recordkeeping is allowed. Manual recordkeeping must not exceed five (5) time periods per calendar year and each period must not exceed 24 hours.
**[Basis: SMAQMD Rule 201, Section 405]**

17. The shutdown procedure for the oxidation ovens must be performed in accordance to the approved shutdown procedure document given in Attachment B.
**[Basis: SMAQMD Rule 201, Section 405]**

18. The oxidation ovens, low temperature furnace, and high temperature furnace must not process fiber unless the process areas of the oxidation ovens and the fugitive emissions that are collected by the low temperature and high temperature furnace end cap hoods are vented to the APC Regenerative Thermal Oxidizer (P/O 24520 or P/O 24521). The APC Regenerative Thermal Oxidizer that is actively serving the process must be in compliance with its respective permit conditions whenever fiber is being processed.
**[Basis: SMAQMD Rule 201, Section 405]**

19. The low temperature furnace and high temperature furnace must not process fiber unless the process areas are vented to the APC Direct Fired Thermal Oxidizer (P/O 24519). The APC Direct Fired Thermal Oxidizer must be in compliance with its respective permit conditions whenever fiber is being processed.
**[Basis: SMAQMD Rule 201, Section 405]**

20. The exhaust from the APC Direct Fired Thermal Oxidizer (P/O 24519) and from the APC Regenerative Thermal Oxidizer that is actively serving the process (P/O 24520 or 24521) must be vented to the APC Baghouse (P/O 24522) at all times that the carbon fiber manufacturing process line is in operation.
**[Basis: SMAQMD Rule 201, Section 405]**

**EMISSION TESTING**

21. Emissions of HCN, VOC, NOx, SOx, PM10, PM2.5, and CO must be tested annually to demonstrate compliance with the emission limits of Condition Nos. 10, 11, and 12. The emission testing must conform to the following test conditions and time schedule:
    A. The maximum precursor process rate that was previously determined according to Condition No. 13 will not be in effect for the annual emission test. However, the precursor process rate utilized during the annual emission test will establish the maximum allowable precursor process rate for the following year as stated in Condition No. 13.
    B. The Regenerative Thermal Oxidizer (P/O 24520 or P/O 24521) and the Direct-Fired Thermal Oxidizer (P/O 24519) must be operated at a firing rate that is as close as practicable to the burner's rated capacity within the limits of optimal line operation.
    C. Submit a source test plan that outlines the test methods and operating parameters to the Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
    D. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of the test if the date has changed from that approved in the source test plan.
    E. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).
    **[Basis: SMAQMD Rule 201, Sections 303.2 and 405]**

22. The Air Pollution Control Officer may waive all or any portion of the annual source test requirements if:
    A. A source test was performed in the previous year in accordance with Condition No. 21, and
    B. The test results of the two previous official tests were not within 75% of permit limits.
    **[Basis: SMAQMD Rule 201, Section 405]**

**EMISSION REDUCTION CREDITS**

23. Mitsubishi Chemical Carbon Fiber and Composites, Inc. must provide sufficient emission reduction credits to the Air Pollution Control Officer to fully offset the following amount of emissions
    **[Basis: SMAQMD Rule 202, Section 302 and Rule 214, Section 302]**

| Equipment | Pollutant | Emissions to be Offset (A) (lb/quarter) | | | |
|---|---|---|---|---|---|
| | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| Carbon Fiber Mfg. Process Line 33 | VOC | 2,678 | 2,708 | 2,738 | 2,738 |
| | NOx | 7,128 | 7,207 | 7,286 | 7,286 |
| | PM10 | 5,249 | 5,307 | 5,365 | 5,365 |
| | PM2.5 | 5,249 | 5,307 | 5,365 | 5,365 |

24. The following emission reduction credits (ERCs) have been provided by Mitsubishi Chemical Carbon Fiber and Composites, Inc. to fully offset the emissions specified in Condition No. 23:
**[Basis: SMAQMD Rule 202, Sections 408 and 409; Rule 204, Section 306; and Rule 214, Sections 408 and 409]**

| Equipment | Pollutant | Emission Credits Provided (A) (lb/quarter) | | | |
|---|---|---|---|---|---|
| | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| Carbon Fiber Mfg. Process Line 33 | VOC | 2,678 | 2,708 | 2,738 | 2,738 |
| | NOx | 7,128 | 7,207 | 7,286 | 7,286 |
| | PM10 (B) | 5,249 | 5,307 | 5,365 | 5,365 |
| | PM2.5 | 5,249 | 5,307 | 5,365 | 5,365 |

(A) Credits were originally surrenders for P/O 24518. Refer to Attachments C, D, and E for the VOC, NOx, and PM10 ERC certificate amounts and quarterly credit distribution.
(B) The amount of PM10 credits surrendered are greater than indicated since an excess was needed to supply the amount necessary for PM2.5.

**RECORD KEEPING & REPORTING**

25. The following records must be continuously maintained onsite for the carbon fiber manufacturing process line for the most recent five year period and must be made available to the Air Pollution Control Officer upon request.
**[Basis: SMAQMD Rule 201, Section 405]**

| Frequency | Information to be Recorded |
|---|---|
| When Operated | A. The maximum precursor process rate allowed calculated pursuant to Condition No. 13 (kg/hr).<br>B. The production data for each production run must include the following:<br>i. Weight of precursor processed (kg/hr).<br>ii. Line speed (meter/hour).<br>iii. Number and type (decitex of ends processed).<br>iv. Number of filaments.<br>v. Start and end dates and times.<br>v. Continuous HCN concentration at the Line 33 exhaust stack (ppm).<br>C. HCN monitor maintenance and activity log. |

26. Emission test reports must be maintained on-site and must be made available to the Air Pollution Control Officer upon request.
**[Basis: SMAQMD Rule 201, Section 405]**

777 12TH STREET, STE. 300
SACRAMENTO, CA 95814-1908

(279) 207-1122
(800) 880-9025

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

27. The Air Pollution Control Officer must be notified within eight (8) hours of determining that the primary continuous HCN emission monitor indicates that the HCN concentration is in excess of 20 ppm, averaged over a period of one hour as shown on the monitor's digital chart recorder. A written follow-up report must be submitted within seven (7) days to the Air Pollution Control Officer. The report must include the date, time, and ppm reading of the excess HCN concentration and any shutdown procedures that were implemented.
**[Basis: SMAQMD Rule 201, Section 405]**

28. Notify the Air Pollution Control Officer of any malfunction or breakdown of the air pollution control equipment as required by SMAQMD Rule 602 – Breakdown Conditions: Emergency Variance.
**[Basis: SMAQMD Rule 602, Section 301]**

29. The permit holder must, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).
**[Basis: SMAQMD Rule 201, Section 303.1]**

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

| SMAQMD RULE NO. | RULE TITLE |
|---|---|
| 201 | GENERAL PERMIT REQUIREMENTS (8-24-06) |
| 202 | NEW SOURCE REVIEW (8-23-12) |
| 204 | EMISSION REDUCTION CREDITS (9-5-1996) |
| 207 | FEDERAL OPERATING PERMIT PROGRAM (7-28-11) |
| 214 | FEDERAL NEW SOURCE REVIEW ((8-23-12) |
| 217 | PUBLIC NOTICE REQUIREMENTS FOR PERMITS (8-23-12) |
| 401 | RINGELMANN CHART (4-19-83) |
| 402 | NUISANCE (8-3-77) |
| 404 | PARTICULATE MATTER (11-20-84) |
| 406 | SPECIFIC CONTAMINANTS (12-06-78) |

The conditions on this Permit to Operate reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



**REVOCABLE AND NON-TRANSFERABLE**

# ATTACHMENT A

## HCN MONITOR MAINTENANCE AND CALIBRATION

1. Manufacturer: Boreal Laser, Inc.
   12846 – 146 Street NW
   Edmonton, AB
   Canada T5L 2H7

Model: GasFinder

Method: Light Absorption

Line 31/32 (Primary and Backup)
Monitor No. 1: Serial No. HCNFC-2001
Monitor No. 2: Serial No. HCNFC-2003

Line 33 (Primary and Backup)
Monitor No. 3: Serial No. HCNFC-2010
Monitor No. 4: Serial No. HCNFC-2011

For each process stack, two Boreal Laser (Model: GasFinder) hydrogen cyanide (HCN) monitors are used to sample the stack via a common sample line. The Boreal Laser Continuous Emissions Monitoring System (CEMS) consists of three components: the Analyzer, the Remote Probe on the stack, and the Data Acquisition and Handling System (DAHS). The HCN analyzer displays the concentration of HCN as a digital readout on the instrument panel, and records the HCN concentration on a strip chart recorder for a permanent record. Two Boreal Laser CEMS units will be utilized for each of the two main process emission stacks. The first instrument will continuously monitor HCN from the main stack. The second unit will be held in reserve, to be installed in the event of a failure of the primary unit. The time required to replace the CEMS and allow for stabilization is minimal; however, during such CEMS downtime, MCCFC must revert to hourly Dräeger tube readings for a period not to exceed 24 hours. These readings will be recorded.

2. Calibration

The instrument contains an HCN sample of known concentration in a sealed glass ampoule. The CEMS self-calibrates every few seconds, by comparing the measured light intensity to the stored reference data. The instrument is in calibration and functioning correctly when the two intensities match. If the measured intensity is less than 95% of the reference standard, the CEMS will shut down and display an error message. In this event, the unit must be returned to the manufacturer for repair and the backup analyzer will be installed in its place.

3. Routine Maintenance

The manufacturer's recommended light level is between 1,000 and 11,000 on the analyzer's scale. The overall intensity of the reflected light decreases as fine particulate matter accumulates on the reflector. As the light intensity approaches the value of 1,000 on the analyzer scale, MCCFC will perform clean-up on the reflector.

# ATTACHMENT B

## PROCESS SHUTDOWN PROCEDURE

Scope

This procedure applies to process lines 31, 32, and 33 at MCCFC's Sacramento manufacturing facility.

Procedure

**Controlled Shutdown**

1. Keep all oven doors closed during the shutdown event.
2. Switch off all oven heaters and activate misting system while progressively slowing down the process line speed until reaching a full-stop.
3. For all ovens, wait until the oven temperature is below 95 °C and drives are off before opening the main oven doors.

**Emergency Shutdown**

1. Keep all oven doors closed during the shutdown event.
2. Switch off oven heating and activate the oven fire suppression system to allow water into the ovens for a minimum of 15 seconds, or longer if needed. Stop the drives using the stop button or emergency stop button.
3. For all ovens, wait until the oven temperature is below 95 °C and drives are off before opening the main oven doors.

# ATTACHMENT C

# P/O 25918

## VOC Emission Reduction Credits (ERCs)

The following VOC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the VOC emission offset requirements as stated in Condition No. 23 of the Permit to Operate.

| Emission Reduction Credit Certificate No. | Face Value of Surrendered VOC ERCs (lb/quarter) | | | | Credit Adj. (A) | Credit Adj. (B) | Offset Ratio | Value Applied to the Permit's VOC Emission Liability (lb/quarter) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| FRAQMD ERC# 2001-30-S1-S1-S1-R1-S1 | 5,303 | 5,732 | 1,999 | 5,399 | N/A | N/A | 2:1 | 2,651.5 | 2,866 | 999.5 | 2,699.5 |
| FRAQMD ERC# 2001-30-S2-S1 | 0 | 27 | 2,665 | 0 | 75% | N/A | 2:1 | 0 | 10.1 | 999.4 | 0 |
| FRAQMD ERC# 94-4-2A-S3 | 53 | 118 | 157 | 77 | N/A | N/A | 2:1 | 26.5 | 59 | 78.5 | 38.5 |
| FRAQMD ERC# 99001-S2-S1 | 0 | 0 | 1,969 | 0 | 75% | 58.75% | 2:1 | 0 | 0 | 433.8 | 0 |
| VOC Credit Subtotal | | | | | | | | 2,678 | 2,935 | 2511 | 2738 |
| 227 lb of surplus credits moved from the 2nd Quarter to the 3rd Quarter | | | | | | | | --- | -227 | 227 | --- |
| VOC Credit Total | | | | | | | | 2,678 | 2708 | 2738 | 2738 |

(A) Credits are adjusted by 75% per a federal requirement for rice burning credits.
(B) Credits are adjusted by a correction factor of 14.1/24 which is necessary for federal enforceability.

# ATTACHMENT D

# P/O 25918

## NOx Emission Reduction Credits (ERCs)

The following NOx ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the NOx emission offset requirements as stated in Condition No. 23 of the Permit to Operate.

| Emission Reduction Credit Certificate No. | Face Value of Surrendered Nox ERCs (lb/quarter) | | | | Credit Adjustment (A) | Offset Ratio | Value Applied to the Permit's NOx Emission Liability (lb/quarter) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| FRAQMD ERC# 2001-30-S1-S1-S1-R1-S1 | 5,051 | 6,182 | 606 | 5,366 | N/A | 2:1 | 2,525.5 | 3,091 | 303 | 2,683 |
| FRAQMD ERC# 2001-30-S2-S1 | 0 | 515 | 2,948 | 0 | 75% | 2:1 | 0 | 193.1 | 1,105.5 | 0 |
| FRAQMD ERC# 94-4-2A-S3 | 9,205 | 7,846 | 11,755 | 9,206 | N/A | 2:1 | 4,602.5 | 3,923 | 5,878 | 4,603 |
| | | | | | | NOx Credit Total | 7,128 | 7,207 | 7,286 | 7,286 |

(A) Credits are adjusted by 75% per a federal requirement for rice burning credits.

# ATTACHMENT E

# P/O 25918

## PM10 and PM2.5 Emission Reduction Credits (ERCs)

The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the PM10 and PM2.5 emission offset requirements as stated in Condition No. 23 of the Permit to Operate.

| Emission Reduction Credit Certificate No. | Face Value of Surrendered PM10 ERCs (lb/quarter) | | | | Credit Adj. (A) | Credit Adj. (B) | Offset Ratio | Value Applied to the Permit's PM10 and PM2.5 Emission Liability (lb/quarter) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| FRAQMD ERC# 2001-30-S1-S1-S1-R1-S1 | 10,454 | 6,712 | 2,679 | 12,487 | N/A | 94.14% | 2:1 | 4,921 | 3,159 | 1,261 | 5,878 |
| FRAQMD ERC# 2001-30-S2-S1 | 4,956 | 6,083 | 3,572 | 2,575 | 75% | 94.14% | 2:1 | 1,750 | 2,147 | 1,261 | 909 |
| PM2.5 Credit Subtotal | | | | | | | | 6,671 | 5,306 | 2,522 | 6,787 |
| 1,421 lb of surplus credits moved from the 1st Quarter to the 3rd Quarter | | | | | | | | -1,421 | --- | 1,421 | --- |
| 1,422 lb of surplus credits moved from the 4th Quarter to the 3rd Quarter | | | | | | | | --- | --- | 1,422 | -1422 |
| 1 lb of surplus credits moved from the 1st Quarter to the 2nd Quarter | | | | | | | | -1 | 1 | | |
| PM2.5 Credit Total | | | | | | | | 5,249 | 5,307 | 5,365 | 5,365 |

(A) Credits are adjusted by 75% per a federal requirement for rice burning credits.
(B) Credits are adjusted by 94.14% which is the fraction of PM10 on the certificate that is PM2.5.

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**Findings Required for Grant of Variance - Checklist**

Health and Safety Code section 42352 states that no variance shall be granted unless the hearing board makes all of the following (six) findings:

| | |
|---|---|
| (1) The petitioner is, or will be, in violation of, a rule or permit condition. | |
| (2) Due to conditions beyond the reasonable control of the Petitioner, requiring compliance would result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business. | |
| (3) The closing or taking would be without a corresponding benefit in reducing air contaminates. | |
| (4) The petitioner has given consideration to curtailing operations of the source in lieu of obtaining a variance. | |
| (5) During the variance period, the petitioner will reduce excess emissions to the maximum extent feasible. | |
| (6) If requested by staff, Petitioner will monitor and report excess emissions. | |

**Hearing Date** 3/21/2024
**Petitioner** Verizon Wireless-Chicken Ranch
**Petition Type** Short-term Variance
**Petition Number** 2024-003

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

## Petitioner Request

Petitioner has filed a Short-Term Variance Petition with this Board for a standby internal combustion engine requesting relief from Sacramento Metropolitan Air Quality Management District (District) Rule 201, General Permit Requirements. Specifically, Petitioner is requesting relief from Permit to Operate (PTO) 23961 condition 9, for operating the engine for more than the maximum allowable hours of operation.

## Recommendation

Staff supports the requested variance if the Board determines that it can make the above findings. Staff recommends adoption of the following conditions:

1. Petitioner must use a Tier 4 engine if the electrical service is not restored by March 29, 2024. District Staff may approve a longer period if Petitioner establishes that it could not reasonably meet the deadline.
2. This Order is not final and will not be issued unless and until Petitioner pays the variance fees.

## Petitioner Address

Verizon Wireless Environmental Compliance
295 Parkshore Drive
Folsom, CA 95763

## Equipment Location

Verizon Wireless-Chicken Ranch
4718 Engle Road
Carmichael, CA 95608

## Discussion

The Petitioner is a telecommunications business. On June 10, 2016, the Petitioner was issued PTO 23961 to operate a Kukje/Generac D3400T-Gen1 85BHP diesel-fired standby engine driving an emergency standby generator. The generator provides emergency power to a wireless telecommunications tower when electrical service from the serving utility has been interrupted. The PTO established the maximum allowable operational hours for the engine of 200 total hours per quarter and per year.

On January 18, 2024, at about 10:00 am, the electrical service from the serving provider (SMUD) was interrupted due to damage to the main breaker. This caused the standby emergency engine to operate. The engine has been operating since January 18, 2024, for 24 hours per day 7 days per week, awaiting repairs to be made to restore the permanent electrical service. Based on this engine usage, the engine exceeded its permitted 200 hours of total usage on or about January 26, 2024. The engine continues to accrue usage hours above its permitted limits until repairs are made to restore electrical service from the serving utility. According to the Petitioner, the repair of the main breaker is under the control of the property landlord.

The Petitioner is requesting relief from PTO 23961 condition 9 to allow for the engine to operate in exceedance of its permitted operational limits until electrical service from the serving utility has been restored.

As of the date of this staff report, the Petitioner has not paid the variance fees, which are required to be filed with the Petition under Rule 601, section 401. As a courtesy, the District staff have prepared and released this report. If the fees are not paid by the date of the hearing and the Board opts to issue the variance, staff recommend adding a condition that the Findings & Orders not be signed and issued until the fees are paid.

**FINDINGS**: No variance may be granted unless the Hearing Board makes all the six findings set forth below under Health and Safety Code 42352, subs. (a) (1-6). It is the Petitioner's burden to prove, by a preponderance of the evidence, facts sufficient to support the mandatory findings.

**Finding 1 – Violation**
*"That the petitioner for a variance is, or will be, in violation of 41701 [opacity] or of any rule, regulation, or order of district." (Health and Safety Code, § 42353, subs. (a) (1).)*

**Discussion**: Petitioner is in violation of condition 9 of PTO 23961 for operating the equipment in excess of the maximum allowable permitted usage of 200 hours per quarter and per year. The petitioner continues to accrue hours in excess of the permitted 200 hour limit until electrical service from the serving utility has been restored.

**Finding 2 – Reasonable Control**
*"That, due to conditions beyond the reasonable control of petitioner, requiring compliance would result in either:(A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business. In making those findings where the petitioner is a public agency, the hearing board shall consider whether or not immediate compliance would impose an unreasonable burden on an essential public service." (Health Safety Code § 42352, subs. (a)(2).)*

**Discussion**: The question here is two-fold: (1) whether the cause of the violation is beyond the Petitioner's reasonable control, and (2) whether, because of its inability to comply, the denial of a variance would result in either an arbitrary or unreasonable taking of property or the practical closing or elimination of its business.

1. Whether the cause of the violation is beyond Petitioner's reasonable control

   The repairs necessary to restore electrical service from the serving utility are, according to the Petitioner, under the control of the property landlord. To confirm this assertion, the District has requested that the Petitioner provide the contract or details of the contract between the Petitioner and the property landlord to the Hearing Board. The Board will need to determine, based on the contract language and specific steps taken by Petitioner to force the landowner to make repairs, whether the delay in repairs is beyond the reasonable control of the Petitioner. If Petitioner fails to produce the contract, and fails to adequately explain this failure, the Board may assume that it contains language or provisions that would adversely reflect on the reasonableness of Petitioner's actions.

2. Whether requiring compliance will result in the arbitrary or unreasonable taking of Petitioner's property or the closing or elimination of its business

   The telecommunications tower must have electrical power to operate. The emergency standby generator, permitted under PTO 23961, is used in cases where serving utility power is not available. The Petitioner asserts that shutting down the generator and thus the telecommunications tower would impact their operations and the telecommunications service it provides to its customers. The Petitioner should provide full details to the Hearing Board about the financial and business impact of shutting down the cellular tower.

**Finding 3 – Relative Benefit to Air Quality**
*"That the closing or taking would be without a corresponding benefit in reducing air contaminants." (Health Safety Code § 42352, subs. (a)(3).)*

**Discussion**: The generator powering the cellular tower is rated at 85 BHP. It is a Tier 3 engine. Below is a table showing the permitted emission factors along with the estimated emissions:

| Pollutant | VOC | NOx | SOx | PM10 | PM2.5 | CO |
|---|---|---|---|---|---|---|
| Emissions Factor (g/hp-hr) | 1.14 | 3.5 | 0.005 | 0.17 | 0.17 | 3.7 |
| Emissions Per Day (lbs) (A) | 5.1 | 15.7 | 0.0 | 0.8 | 0.8 | 16.6 |
| Estimated Emissions to Date (lbs) (B) | 307.6 | 944.4 | 1.3 | 45.9 | 45.9 | 998.4 |
| Estimated Future Emissions (lbs) (C) | 16.7 | 51.2 | 0.1 | 2.5 | 2.5 | 54.1 |

(A) Emissions are based on 85 BHP, 24 hours/day
(B) Emissions are based on engine operating 24hrs/day from January 18, 2024 at 10:00am through time of Staff Report March 18, 2024 at 10:00am.
(C) Emissions are based on engine operating 24hrs/day from time of Staff Report March 18, 2024 at 10:00am through time of Hearing Board March 21, 2024 at 4:00pm

Not granting the variance would require the petitioner to decide whether (1) to continue operating the generator in violation likely resulting in a higher penalty or (2) to shut down the operation with any resultant business impacts. If the Board opts to issue the variance, it may consider requiring the Petitioner to reduce air contaminates by using a portable generator of similar rating but cleaner emitting (Tier 4 or better) to reduce the overall emission of air contaminates. The difference in emissions between the currently permitted Tier 3 engine and a Tier 4 engine are shown below:

| Pollutant | VOC | NOx | SOx | PM10 | PM2.5 | CO |
|---|---|---|---|---|---|---|
| Emissions Factor Tier 4 (g/hp-hr) | 0.14 | 0.29 | 0.005 | 0.038 | 0.028 | 3.7 |
| Emissions Factor Tier 3 (g/hp-hr) | 1.14 | 3.5 | 0.005 | 0.17 | 0.17 | 3.7 |
| | | | | | | |
| Tier 4 Emissions Per Day (lbs) (A) | 0.6 | 1.3 | 0.0 | 0.2 | 0.2 | 16.6 |
| Tier 3 Emissions Per Day (lbs) (A) | 5.1 | 15.7 | 0.0 | 0.8 | 0.8 | 16.6 |
| **Difference in Emissions** | **4.5** | **14.4** | **0.0** | **0.6** | **0.6** | **0.0** |

(A) Emissions are based on 85 BHP, 24 hours/day

**Finding 4 – Curtailment of Operations**
*"That the applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance." (Health Safety Code § 42352, subs. (a)(4).)*

**Discussion**: The petitioner has considered curtailing operations, but without operation of the emergency standby engine the cellular tower will cease operating and lead to service interruptions. Service interruptions, according to the petitioner, would impact the ability for the public to communicate via cell phone, including the inability to communicate with emergency services.

**Finding 5 – Reduction of Excess Emissions**
*"During the period the variance is in effect, that the applicant will reduce excess emissions to the maximum extent feasible." (Health Safety Code § 42352, subs. (a)(5).)*

**Discussion**: There are two issues pertaining to excess emissions. First, whether the Petitioner has committed to reducing its emissions, as required by the statute, and second, whether the Petitioner is obligated to pay excess emission fees in the event the variance is granted.

1. Control of excess emissions: There is no feasible method of controlling excess emissions produced by the engine if the engine remains in operation. The engine is not capable of modulation. The only methods of reducing excess emissions are curtailing operation of the equipment or temporarily replacing the equipment with a portable engine that discharges lower emissions.
2. Excess emission fees: District Rule 302 requires the payment of excess duration fees for any variance approved for more than 90 days. The Petitioner is requesting a short-term variance. Compliance will be

achieved within 90 days of granting variance relief, so the excess emission fee is not triggered.

**Finding 6 – Monitoring**
*"During the period the variance is in effect, that the applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the district, and report these emission levels to the district pursuant to a schedule established by the district." (Health Safety Code § 42352, subs. (a)(6).)*

**Discussion**: The Petitioner has agreed to provide to the District a report once per week every Monday until electrical service has been restored, which includes:

1. The total hours of engine operation during the previous week.
2. An update on the anticipated repair timeline for serving utility power to be restored.

**NUISANCE FINDING**
*"No variance shall be granted if the operation will result in a violation of Section 41700."*

**Discussion**: Staff has not identified any violation of 41700 that may result from the granting of this variance. The Petitioner is subject to CH&S Code Section 41700 and District Rule 402 – Nuisance. However, no complaints have been received by District staff regarding this engine's operation.

**OTHER REQUIREMENTS**
The Hearing Board may prescribe other requirements as set forth under Health and Safety Code 42353.

**Discussion**: As discussed above, the Board may consider requiring the use of a cleaner generator. No other requirements have been identified.

---

**ATTACHMENTS:**

| Description | Type | Upload Date |
|---|---|---|
| Petition for Short-Term Variance | Petitions | 3/18/2024 |
| Checklist for Required Findings - H&S 42352 | Resolution | 3/18/2024 |

---

**Approvals/Acknowledgements**

District Counsel or Designee: Kathrine Pittard, Approved as to Form 3/18/2024

Received by Staff, Fri 3/8/24

Received
on Mar 11,2024

**BEFORE THE HEARING BOARD**
**OF THE**
**SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT**

**PETITION APPLICATION**

| Petitioner's Name, Business Name, and Address | For Office Use Only |
|---|---|
| Verizon Wireless Environmental Compliance<br>Verizon Wireless-Chicken Ranch<br>295 Parkshore Dr, Folsom CA 95763 | Variance No. 2024-003 ~~Emergency~~ Short-term Variance<br>☐ Filing Fee Received, Receipt No: _____ |
| Telephone No: ( 925) 407-7714 | ~~0~~ 10 Day Notice of Hearing Required (due March 11, 2024)<br>Hearing Date: March 21, 2024 |

**INSTRUCTIONS**

A. Please fill in the petitioner's name, business name, address, and telephone number in the above space.

B. The petitioner is (check one):

☐ Individual ☐ Partnership ☒ Corporation ☐ Other (specify)

C. Please refer to the applicable sections of the California Health & Safety Code (H&S Code) and the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District (SMAQMD) when completing the petition. The SMAQMD staff and the Business Environmental Resource Center are available to assist Small Businesses with the technical aspects of filling out this form and the development of compliance schedules.[1]

D. Please complete attached pages with thorough and documented factual responses. Review Rule 601, Procedure Before the Hearing Board, carefully to ensure the petition is complete. The petition and anything you supply in support of your petition will become part of the public record.

E. Please submit this form and filing fee to SMAQMD, 777 12th Street, Third Floor, Sacramento, California 95814. The submittal date for a petition shall be the date on the receipt issued by the District acknowledging the petitioner's full payment of the required initial fee and the newspaper publication fee (if required). After receipt, SMAQMD will notify you of the time and date of your hearing.

[1] See Health and Safety Code section 42323. The Business Environmental Resource Center's Telephone number is (916) 649-0225.

F. Please use a check mark in the ☐ to identify the type of petition being submitted and circle the appropriate fee. Fee amounts include the newspaper publishing fee (when required). Fees in parentheses are for small business as defined by Rule 302:

| **Variance Petitions** | **Fee** | |
|---|---|---|
| ☐ Interim Variance | $1,024 | ($765) |
| ☒ Short-Term Variance (see email 3/11/24 requesting "revised" petition) | $1,024 | ($765) |
| ☐ Regular Variance | $1,084 | ($825) |
| ☒ Emergency Variance | $495 | ($495) |
| **Product Variance Petitions** | | |
| ☐ Interim Product Variance | $1,024 | ($765) |
| ☐ Product Variance | $1,084 | ($825) |
| **Petition to Modify an Order Permitting a Variance** | | |
| ☐ Interim Variance | $1,084 | ($825) |
| ☐ Short-term Variance | $1,084 | ($825) |
| ☐ Regular Variance | $1,084 | ($825) |
| ☐ Interim Product Variance | $1,084 | ($825) |
| ☐ Product Variance | $1,084 | ($825) |
| **Petition to Modify Increments of Progress** | | |
| ☐ Interim Authorization—Variance | $1,024 | ($765) |
| ☐ Interim Authorization—Product Variance | $1,024 | ($765) |
| ☐ Variance | $1,024 | ($765) |
| ☐ Product Variance | $1,024 | ($765) |
| **Petition to Modify a Final Compliance Date** | | |
| ☐ Variance | $1,084 | ($825) |
| ☐ Product Variance | $1,084 | ($825) |
| **Permit Action Petition** | | |
| ☐ Review of Permit Denial | $1,084 | ($825) |
| ☐ Review of Conditional Approval | $1,084 | ($825) |
| ☐ Review of Permit Suspension | $1,084 | ($825) |
| **Other Petitions** | | |
| ☐ Rehearing of a Variance Decision | $1,084 | ($825) |
| ☐ Review of an Emission Reduction Credit Refusal | $1,084 | ($825) |
| ☐ Petition by an Aggrieved Party | $1,084 | ($825) |

G. Please enclose filing fee with each petition. Make checks payable to the **SMAQMD**. No petition will be processed unless filing fee is submitted with petition.

**In addition to the filing fee, SMAQMD may subsequently charge a petitioner a fee for staff time exceeding 7.5 hours and/or an "excess duration fee." See sections 301.2 and 301.4 of Rule 302—HEARING BOARD FEES.**

**CONTENTS OF PETITION FOR VARIANCE**
(Please type or print clearly)

1. Name, title, address, and phone number of person authorized to receive notices regarding the petition:

| Name, Title, and Address | Telephone Number |
|---|---|
| Armand Delgado | ( 925 ) 407-7714 |
| Environmental Compliance | |
| 295 Parkshore Dr | |
| Folsom CA 95630 | |

2. Names and addresses of partners or officers:

| Name(s) | Address(es) |
|---|---|
| | |
| | |
| | |

3. Name and location of business or activity if different from #1 above:

Verizon Wireless-Chicken Ranch
4718 Engle Road, Carmichael CA 95608
PTO 23961

4. Briefly describe the nature of your business:

Wireless Telecommunications

5. Briefly describe the equipment which is the subject of this petition. List SMAQMD Permit Nos., indicate if equipment is exempt from Permit requirements, or answer No. 6 below:

PTO 236961

IC Engine Standby, Make Kukje/Genrac Model: D3400T-GEN 1 Serial NO:TP9X00052, 85hp @1800 RPM 208 In DISPLACEMENT, DIESEL FIRED, DRIVIG AND EMERGENCY STANDBY GENERATOR

6. I have not received permit(s) yet. My application for a Permit To Operate was submitted on

_____, _____.

7. Have you been issued a Notice of Violation concerning the operation of this equipment?

☐ YES ☒ NO

8. California Health and Safety Code section 41700 states:

> "Except as otherwise provided in Section 41705[2] no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

Is your company or agency (or will your company or agency be) in violation of California Health and Safety Code section 41700?

☐ YES ☒ NO

If yes, please explain:

If yes, please also attach the name(s) and address(es) of any complainant(s).

[2] Among other things, section 41705 exempts (from section 41700) odors from agricultural operations. See section 41705 for details.

9. Is your company or agency (or will your company or agency be) in violation of:

   a. California Health and Safety Code section 41701[3] or

   b. Any Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule, regulation, order, and/or Permit condition?

   If so, please explain the violation and please cite the statute, Rule, regulation, order, and/or Permit condition that is being, or will be, violated.

   EXTENDED LOSS OF COMMECRICAL POWER

   Facility is in violation of run limits set by SMAQMD Rule 202, Section 110.2

   Generator engine will continue to power the facility to provide necessary communications to the region affected. Possible restoration of commercial power by 3/15/24

   Please attach a copy of the pertinent Permit(s) to this petition. Remember, if any Permit or other information you supply as part of this variance petition process contains confidential information, please contact SMAQMD Office of District Counsel **before** disclosing such confidential material.

10. If you are required to comply immediately with the statute, Rule, regulation, order, or Permit condition (cited in your response to Question No. 9 above), are there conditions beyond your reasonable control that would result in any of the following situations:

    a. An arbitrary or unreasonable taking of your property; or

    b. The practical closing or elimination of a lawful business; or

    c. An unreasonable burden on a publicly owned or operated "essential public service," *i.e.*, a prison, detention facility, police or fire fighting facility, school, health care facility, landfill, gas control or processing facility, sewage treatment works, or water delivery operation?

    Please discuss the evidence supporting your conclusion:

    Please be prepared to supply documentation or other proof of your evidence to the Hearing Board or the SMAQMD staff.

[3] Among other things, section 41701 pertains to the opacity of visible air pollution such as smoke. The section specifies that emissions shall not be as dark as, or darker than, the No. 2 shade designation on a Ringelmann Chart.

11. Would the taking of property, closing or elimination of a lawful business, or unreasonable burden on an essential public service be without a corresponding benefit in reducing air contaminants?

    Please discuss your evidence:

    _____

    _____

    _____

    _____

    _____

    _____

    Please be prepared to supply documentation or other proof of your evidence to the Hearing Board or the SMAQMD staff.

12. Please discuss the consideration your company or agency has given to:

    a. Curtailing the operation of the source in lieu of obtaining a variance, and

    b. Enacting other alternatives to the variance (besides curtailment), and

    c. Why operation curtailment or other alternatives are less desirable or feasible than seeking this variance.

    _____

    Emergency Standby generator is functioning as intended and supporting the wireless antenna facility providing essential cellphone service for the public as well as emergency responders in the area. Landlord of the location has damaged power equipment affecting commercial power being supplied to the Verizon Wireless facility. Landlord has been slow to respond to requests to aid in restoring commercial power service.

    _____

13. During the period the variance is in effect, do you agree to monitor or otherwise quantify emission levels from the source, if requested to do so, and report these emission levels to SMAQMD pursuant to a schedule established by the District?

    ☒ YES ☐ NO

    Monitoring of emission levels is often necessary while a variance is in effect. Monitoring helps to guarantee minimal environmental consequences while a source is out of compliance with District regulations. In the absence of a monitoring program, the Hearing Board may be unable to find that a non-compliant activity will not be a public nuisance.

If you are unwilling to monitor emission levels, please explain why not and describe why your non-compliant activity will not create a public nuisance:

We will be willing to provide an estimate of emissions based on total hours run against the manufactures emission specifications, is so requested.

14. Estimate the *excess emissions* that may occur while your requested variance is in effect. *Excess emissions* are emissions of air pollutants beyond the emissions allowed by SMAQMD Rules, regulations, orders or Permit conditions. SMAQMD staff may be able to assist you with this estimate:

| **POLLUTANT(S)** (*e.g.*, VOC, $NO_X$, PM10, PM2.5, Hexavalent Chromium) | **LBS. PER DAY OF EXCESS EMISSIONS** | **NO. OF DAYS EXCESS EMISSIONS PRODUCED** | **% OPACITY** (If Applicable) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Please Note: SMAQMD will charge a petitioner an "excess duration fee" for a variance that:
- Is in effect for more than 3 months, and
- Is issued for equipment identified by SMAQMD staff report as an excess emissions source.

The excess duration fee is:
- $165 per month exceeding 3 months for small businesses, or
- $275 per month exceeding 3 months for large businesses.

See section 301.4 in Rule 302—HEARING BOARD FEES. SMAQMD will charge the "excess duration fee" following completion of the staff report for the variance. The fee is in addition to the initial filing fees collected by SMAQMD.

15. Please describe the action you will take to reduce *excess emissions* to the maximum extent feasible. If you considered a specific course of action, but excluded it as infeasible, please list the action and explain why it is infeasible.

Generator will automatically power down once commercial power service is restored. Verizon Wireless will confirm unit has powered down.

16. What are the advantages and disadvantages to the residents of the District from requiring compliance or resulting from granting this petition request?

The Advantages:

The Disadvantages:

Loss of cell phone service to the immediate affects the public from reaching out to emergency responders. Emergency responders relay daily on cellular communcation service

17. Please discuss your past diligence in complying with the applicable standards:

Verizon Wireless is working actively to assist the land lord in the repair of the own equipment.

18. Describe your method of achieving compliance, detailing any equipment to be installed or modifications to be made:

19. Fill in the date on which you expect to be in compliance with the rules and/or regulations:
At the time of this filing the landlord has notified us of a possible estimate to restore power by 3/15/24 but there is no confirmed date at this time.

If more than one year, attach a schedule of increments of progress, identifying the dates of each milestone. The schedule shall include, but not be limited to, the date for (a) submitting plans, (b) awarding contracts, (c) commencing construction, (d) completing construction, and (e) achieving final compliance.

NOTE: Do not overly rely on a potential future change in the law, including SMAQMD Rules and regulations, as a means of coming into compliance. The Hearing Board may not and does not control the regulatory agenda of any law-making body such as the District's Board of Directors.

Any Additional Information:

Any person who knowingly provides false information in this petition or any supporting documentation may be subject to penalties up to $35,000 under Health and Safety Code Section 42402.4.

**I declare under penalty of perjury that the foregoing is true and correct.**

Signature: Armand Delgado

Date: 3/7/2024

Name (Print): Armand Delgado

Title: E H S

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

SACRAMENTO METROPOLITAN

AIR QUALITY
MANAGEMENT DISTRICT

(916) 874-4800
FAX (916) 874-4899

# PERMIT TO OPERATE

**ISSUED TO:** **VERIZON WIRELESS** CHICKEN RANCH

**EQUIPMENT LOCATION:** **4718 ENGLE ROAD, CARMICHAEL, CA 95608**

| PERMIT NO. | EQUIPMENT DESCRIPTION |
|---|---|
| 23961 | IC ENGINE STANDBY, MAKE: KUKJE/GENERAC, MODEL: D3400T-GEN1, SERIAL NO.: TP9X00052, 85 BHP @ 1,800 RPM, 208 $IN^3$ DISPLACEMENT, DIESEL FIRED, DRIVING AN EMERGENCY STANDBY GENERATOR. |

## SUBJECT TO THE FOLLOWING CONDITIONS:

**GENERAL**

1. The equipment must be properly maintained and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.
   **[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.1]**

2. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:
   A. Enter the source premises or any location which any records required by this Permit to Operate are kept.
   B. Access and copy any records required by this Permit to Operate.
   C. Inspect or review any equipment, operation, or method required under this Permit to Operate.
   D. Sample emissions from the source or require samples to be taken.
   **[Basis: SMAQMD Rule 201, Section 405]**

3. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the SMAQMD Rules and Regulations.
   **[Basis: SMAQMD Rule 201, Sections 303.1, 405]**

4. The facility may not discharge air contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose,

**DATE ISSUED:** 06-10-2016
**DATE EXPIRES:** 06-13-2017 (UNLESS RENEWED)

LARRY GREENE
AIR POLLUTION CONTROL OFFICER

BY: _____



PERMIT NO.: 23961

**REVOCABLE AND NON-TRANSFERABLE**

health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
**[Basis: SMAQMD Rule 402, Section 301]**

5. A legible copy of this Permit to Operate must be maintained on the premises with the equipment.
**[Basis: SMAQMD Rule 201, Section 401]**

**EMISSIONS LIMITATIONS**

6. The IC engine must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour if the discharge is as dark or darker than Ringelmann No. 1 or is equal to or greater than 20% opacity.
**[Basis: SMAQMD Rule 401, Section 301]**

7. The engine must meet the following BACT standards
**[Basis: SMAQMD Rule 202, Section 408.2.a]**:
   A. EPA-certified Tier 3 engine, and
   B. An engine that meets the following ATCM standards:
   NOx + VOC: 3.5 g/hp-hr
   PM: 0.15 g/hp-hr (based on filterable portion only)

8. The emissions from the IC engine may not exceed the following:
**[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.2]**

| Pollutant | Emission Factors (A) (g/hp-hr) | Emission Limits (B) | | |
|---|---|---|---|---|
| | | lb/day | lb/quarter | lb/year |
| VOC (C) | 1.14 | 5.1 | 43 | 43 |
| NOx (C) | 3.5 | 15.7 | 131 | 131 |
| SOx | 0.005 | 0.0 | 0 | 0 |
| PM10 | 0.17 | 0.8 | 6 | 6 |
| PM2.5 | 0.17 | 0.8 | 6 | 6 |
| CO | 3.7 | 16.6 | 139 | 139 |

(A) Emission factors for VOC, NOx, NOx + VOC, and CO are based on the District's BACT standards (Tier 3 standard). PM10 and PM2.5 emission factors include both the condensable portion and the filterable portion of the particulates. The filterable portion is based on the certification standard and the condensable portion is derived using the condensable to filterable fraction, taken from AP-42, Table 3.4-2 (10/96), multiplied by the certification standard ((0.15 g/hp-hr + 0.15 g/hp-hr × 0.0077/0.0496)=0.17 g/hp-hr). $SO_X$ emission factor is based on AP-42, Table 3.3-1 (10/96) using a fuel sulfur content of 15 ppm.
(B) Emissions are based on 85 BHP, 24 hours/day, 200 hours/quarter and 200 hours/year of operation, and the emission factors in this table.
(C) The engine is required to comply with the combined NOx + VOC emission standard. For the purpose of calculating NOx and VOC individually, VOC emissions are assessed at the worst case scenario of the uncontrolled AP-42 emission factor of 1.14 g/bhp-hr and NOx emissions are assessed at the worst case limit of 3.5 g/bhp-hr.

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**EQUIPMENT OPERATION**

9. The IC engine may only be operated for maintenance and emergency purposes and must not operate more than:
**[Basis: SMAQMD Rule 202, Section 110.2 and Title 17 CCR, Section 93115.6 (a)(3)(A)]**

| Operational Hours | Maximum Allowable Operation | | |
|---|---|---|---|
| | (hours/day) | (hours/quarter) | (hours/year) |
| Maintenance (A) | N/A | 50 | 50 |
| All Operation - Maintenance (A) and Emergency (B) | 24 | 200 | 200 |

(A) Maintenance is defined as: the operation of an IC engine to preserve the integrity of the engine, its associated generator or the facility's electrical distribution system, or to verify compliance with the applicable rules and regulations – if verification is required by SMAQMD.
(B) Emergency operation is defined as: operation of an IC engine when electrical service from the serving utility has been interrupted due to an unforeseeable event.

10. The IC engine must be equipped with a non-resetting hour meter, with a minimum display capability of 9,999 hours.
**[Basis: SMAQMD Rule 201, Sections 303.1 and 405, and Title 17 CCR, Section 93115.10 (d)(1)]**

11. To determine whether the engine complies with opacity requirements, the Air Pollution Control Officer or designee may require the permit holder to operate the IC engine during a SMAQMD inspection. The inspection will be conducted during daylight hours, and the IC engine must be operated at maximum anticipated load and from a cold start condition.
**[Basis: SMAQMD Rule 201, Section 405]**

12. The IC engine may only be fueled with a CARB-approved diesel fuel or a fuel that meets the CARB requirements in 17 CCR Section 93115.5.
**[Basis: SMAQMD Rule 201, Section 303.1 and Title 17 CCR, Section 93115.5]**

13. The exhaust stack of the IC engine must exit vertically and must not be obstructed during engine operation. A flapper-type rain cap is permitted provided it does not impede the vertical exhaust flow. Stack height and diameter must be consistent with any health risk assessment performed.
**[Basis: SMAQMD Rule 201, Section 405 and Rule 402, Section 301]**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**RECORD KEEPING & REPORTING**

14. The following records must be continuously maintained onsite for the most recent five year period and must be made available to the Air Pollution Control Officer upon request. Monthly, quarterly, and annual records shall be made available within 30 days of the end of the reporting period.
**[Basis: SMAQMD Rule 201, Section 405 and Title 17 CCR, Section 93115.10 (f)(1)]**

| Frequency | Information to be Recorded |
|---|---|
| When Operated | A. Date.<br>B. Purpose – Either Maintenance (M) or Emergency Power (E).<br>C. Number of hours of operation. |
| Monthly | D. Total number of hours of operation for each operating mode (hours/month). |
| Quarterly | E. Total number of hours of operation for each operating mode (hours/quarter). |
| Annually | F. Total number of hours of operation for each operating mode (hours/year). |
| All Fuel Deliveries | G. Retain purchase records for all fuel purchased for use in the engine. Fuel purchase records must include:<br>i. Identification of fuel type (CARB diesel or 17 CCR Section 93115.5 alternate fuel).<br>ii. Quantity of fuel purchased.<br>iii. Date of fuel purchase.<br>iv. Signature of person receiving fuel.<br>v. Signature of fuel provider indicating that fuel was delivered. |

15. Unless otherwise directed by SMAQMD, by January 31st of every year, the permit holder must submit an Annual Engine Survey to the District stating the total number of hours each engine operated during the previous year, including maintenance and emergency operation. Copies of the Annual Engine Survey form can be found at www.airquality.org. SMAQMD may require the permit holder to supply additional information under the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.). If additional information is required, the SMAQMD will issue a written notification to the permit holder.
**[Basis: SMAQMD Rule 201, Section 303.1]**

777 12TH STREET, 3RD FLOOR
SACRAMENTO, CA 95814-1908

(916) 874-4800
FAX (916) 874-4899

# SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

| SMAQMD RULE NO. | RULE TITLE |
|---|---|
| 201 | GENERAL PERMIT REQUIREMENTS (8-24-06) |
| 202 | NEW SOURCE REVIEW (8-23-12) |
| 401 | RINGELMANN CHART (4-19-83) |
| 402 | NUISANCE (8-3-77) |
| 406 | SPECIFIC CONTAMINANTS (12-6-78) |
| 420 | SULFUR CONTENT OF FUELS (8-13-81) |
| STATE | REGULATION TITLE |
| TITLE 17 CCR SECTION 93115 | CARB AIR TOXICS CONTROL MEASURES - STATIONARY COMPRESSION IGNITION ENGINES |
| FEDERAL | REGULATION TITLE |
| 40 CFR 60 SUBPART IIII | NEW SOURCE PERFORMANCE STANDARDS - STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES |
| 40 CFR 63 SUBPART ZZZZ | NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS - STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES |

The conditions on this Permit to Operate reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



**REVOCABLE AND NON-TRANSFERABLE**

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

June 10, 2016

Mr. Armand Delgado
Verizon Wireless
255 Parkshore Drive
Folsom, CA 95630

Dear Mr. Delgado:

Please refer to your application for an 85 hp Kukje Machinery/Generac standby internal combustion engine for the equipment listed on the attached Permit to Operate (#23961).

Your Permit to Operate is issued **with specific conditions**. If you have any questions regarding the permit conditions contact the District. There is an appeal process for any disputed permit conditions, but you must file an appeal within 30 days of the Permit to Operate being issued. **After this 30-day period, operation under this Permit to Operate shall be deemed acceptance of all the specified conditions.**

Please make all equipment operators aware of the conditions on your Permit to Operate. District staff will conduct periodic inspections of your facility to determine compliance with the conditions of your Permit to Operate and applicable air quality rules. Failure to comply with permit conditions and/or District rules can result in civil/criminal penalties. A copy of the Permit to Operate must be available at the location of the permitted equipment.

If you have any questions regarding SMAQMD rules or permit conditions, you are encouraged to call the SMAQMD's Compliance Assistance Hotline at 916-874-4884 for free confidential assistance. The Compliance Assistance Program also offers free facility reviews consisting of an on-site physical inspection as well as a thorough records review to assist facilities in complying with newly issued permits or any other air quality regulation.

If you have any other questions regarding the issuance of this permit, fees, or basis for the final permit language, you may call the undersigned at 916-874-7357 or *ftrujillo@airquality.org*.

Sincerely,

Felix Trujillo, Jr.

Felix Trujillo, Jr.
Air Quality Engineer

Enclosure

TO: Variance Petitioners DATE: January 22, 2010

FROM: Clerk of the SMAQMD Hearing Board

SUBJECT: Variance Petitions

If your business is or will be in violation of one of the Sacramento Metropolitan Air Quality Management District's (SMAQMD) rules, you may petition the SMAQMD Hearing Board for a variance. If granted, a variance will give you temporary relief from the rule requirements that are being violated. A specified amount of time will be allowed during which you must bring your business into compliance.

A petition form is enclosed. SMAQMD staff will explain the form if requested. We will also assist you in estimating excess emissions. Copies of Rule 601—PROCEDURE BEFORE THE HEARING BOARD and Rule 302—HEARING BOARD FEES are available on the District web site. Please review these documents carefully to familiarize yourself with the hearing process.

You may also use the enclosed petition to appeal the Air Pollution Control Officer's permitting decisions. For instance, if you believe your permit was incorrectly denied, you may petition the Hearing Board to make that determination.

Please be sure to review the findings that the Hearing Board must adopt when making a decision. The findings are in the petition form. IMPORTANT: You must supply the evidence in support of those findings. If the Hearing Board cannot make one of the required findings, the Hearing Board must deny the petition.

Anything that you supply in support of your petition, as well as the petition itself, will become part of the public record. If any information included in such materials is confidential information, please contact the SMAQMD Office of District Counsel **before** disclosing the confidential information.

An incomplete or inadequately documented petition or presentation at the hearing may delay the proceedings. Depending upon the complexity and nature of the situation, some petitioners use legal counsel to prepare the petition and hearing presentation.

After you submit your petition, SMAQMD must provide a public notice for the hearing. The length of notice required will depend upon the type of Hearing Board action you request. The Hearing Board has established a regular hearing schedule that is available on the District web site. **Please submit your completed petition and initial filing fee no later than the deadline shown on the schedule.** All regularly scheduled Hearing Board meetings are held in the SMAQMD conference room at 4:00 P.M.

Emergency variances necessitated by the breakdown of emission control equipment are scheduled on an as needed basis. You must contact the SMAQMD office and fill out a separate form to initiate a breakdown procedure.

Information regarding the initial filing fees is on the following pages. You may be charged fees in addition to the initial fee—per Rule 302.

If you have any questions or need assistance, please call the Clerk of the Hearing Board at (916) 874-4809.

SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

**Findings Required for Grant of Variance - Checklist**

Health and Safety Code section 42352 states that no variance shall be granted unless the hearing board makes all of the following (six) findings:

| | |
|---|---|
| (1) The petitioner is, or will be, in violation of, a rule or permit condition. | |
| (2) Due to conditions beyond the reasonable control of the Petitioner, requiring compliance would result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business. | |
| (3) The closing or taking would be without a corresponding benefit in reducing air contaminates. | |
| (4) The petitioner has given consideration to curtailing operations of the source in lieu of obtaining a variance. | |
| (5) During the variance period, the petitioner will reduce excess emissions to the maximum extent feasible. | |
| (6) If requested by staff, Petitioner will monitor and report excess emissions. | |