

SOUTH COAST AQMD
CLERK OF THE BOARD

PETITION FOR MODIFICATION OF AN EXISTING VARIANCE
BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2023 DEC 15 PM 3: 31

RV
2/21/24

PETITIONER: CALIFORNIA STEEL, INC. _____

CASE NO: 4624-23

FACILITY ID: 46268

FACILITY ADDRESS : 1400 San Bernardino Avenue

[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

CITY, STATE, ZIP: Fontana, California 92335

1. TYPE OF MODIFICATION REQUESTED

- (a) **MODIFICATION/EXTENSION OF A FINAL COMPLIANCE DATE:** If you are operating under a variance and will not be in full compliance by the final compliance date, you may request an extension of the variance and a modification of the final compliance date. **A petition requesting such an extension must be filed at least 45 days prior to the existing final compliance date in order to meet the legal notice requirement.** (Hearing will be held approximately 45 days from date of filing--30-day published notice required.)
- (b) **MODIFICATION OF VARIANCE CONDITIONS:** If you are unable to comply with one or more conditions of an existing variance, you may request a modification of variance conditions. (Hearing will be held approximately 21 days from date of filing--10-day published notice required)
- (c) **MODIFICATION OF INCREMENTS OF PROGRESS:** If you are unable to comply with one or more increments of progress of an existing variance and additional time is required, you may request a modification of those increments of progress. (Hearing will be held approximately 21 days from date of filing--10-day published notice required.)
- (1) **INTERIM AUTHORIZATION:** If compliance with an increment of progress cannot be achieved and you are unable to notify the Hearing Board at least 21 days in advance in order to schedule a noticed hearing, the Board can consider granting **one** extension of the increments of progress (interim authorization). **However**, an interim authorization cannot be granted: (1) for more than 30 days; or (2) to extend a final compliance date of an existing variance. (Hearing will be held approximately 2 working days from date of filing or the next available hearing date thereafter.)
- (d) **OTHER:** Specify: In the alternative, as explained herein, Petitioner requests a Regular Variance _____

Persons with disabilities may request this document in an alternative format by contacting the Clerk of the Board at 909-396-2500 or by e-mail at clerkofboard@aqmd.gov.

If you require disability-related accommodations to facilitate participating in the hearing, contact the Clerk of the Board at least five (5) calendar days prior to the hearing.

[ALL DOCUMENTS FILED WITH CLERK'S OFFICE BECOME PUBLIC RECORD]

2. **CONTACT:** Name, title, company (if different than Petitioner), address, and phone number of persons authorized to receive notices regarding this Petition (no more than two authorized persons).

<u>Olivier F Theard, Esq.</u>	<u>Kathleen Brundage</u>
<u>Sheppard Mullin</u>	<u>Environmental Manager</u>
<u>333 South Hope Street, 43rd Floor</u>	<u>14000 San Bernardino Ave.</u>
<u>Los Angeles, CA Zip 90071</u>	<u>Fontana, CA Zip 92335</u>
<u>☎ (213) 617-5427 Ext.</u>	<u>☎ (909) 350-6480 Ext.</u>
<u>Fax _____</u>	<u>Fax () _____</u>
<u>E-mail otheard@sheppardmullin.com</u>	

3. List the equipment and/or activity that are the subject of this petition, if different from the existing variance. **(Attach copy of last minute order regarding this variance)**

4.

Equipment/Activity	Application/ Permit No.	RECLAIM Device No.	Date Application/Plan Denied (if relevant)*
Replacement Boiler No. 2 – 32.54 MMBtu/hr	A/N 617691	D252	NA

4. List all District rules, and/or permit conditions from which you are requesting variance relief, if different from the existing variance. *Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate the subject equipment only if you are adding a request for relief from permit conditions. If RECLAIM or Title V facility, attach only the relevant sections of the Facility Permit (for example, showing the equipment or process and conditions that are the subject of this petition).*

Rule	Explanation
Permit Condition H23.7	Boiler D252 is not complying with the requirements of Rule 1146, as described below.
Rule 1146(c)(1)	Boiler D252 has been source tested in excess of the Table 1146-1 Group II Unit NOx emission limit of 5 ppmv NOx @ 3% O2 or 0.0062 lb NOx/MMBtu beyond the Rule 1100 Implementation Schedule date of January 1, 2023.
Rule 1146(e)(1)	CSI will not meet the applicable NOx emission limit in Table 1146-1 in accordance with the schedule specified in Rule 1100.
Permit Section K, Condition 8	CSI will not comply with all regulatory requirements while it is in violation of the permit condition and rules identified above.
Rule 203(b)	CSI will operate boilers D252 contrary to permit condition H23.7.

Rule 2004(f)(1)	CSI will operate equipment contrary to permit condition H23.7 and applicable rules.
Rule 3002(c)(1)	CSI will operate equipment contrary to permit condition H23.7 and applicable rules.
Permit Section E, Condition 8	CSI will operate equipment contrary to applicable rules.

5. Explain the steps taken since the last hearing to achieve compliance, including how you have met each of your existing variance conditions and/or increments of progress.

Background & Requested Relief

CSI has come before this Hearing Board on three previous occasions related to the operation of its #2 Boiler (D252). Most recently, on July 6, 2023, the Hearing Board granted a variance allowing CSI to operate the #2 Boiler while CSI implemented fixes designed to allow the Boiler to achieve the 5 ppm limit set forth in District Rules 1100 and 1146. The variance ends on December 29, 2023, and relief is subject to certain Conditions. CSI has satisfied all such Conditions, including performing regular tuning, and providing monthly reports to the District.

Variance Condition 3 required CSI to conduct a source test under approved District protocols no later than December 1, 2023. CSI worked diligently to implement various maintenance tasks on the Boiler. The following tasks were conducted:

- burner assembly removed and disassembled; damaged refractory replaced
- burner reassembled with new gaskets
- voids insulated, and furnace tubes cleaned
- burner rigged back into place and secured
- wiring redone and reconnected
- replaced fuel meter, which was calibrated
- closed firesides with new gaskets
- refractory cured
- burner tuned several times

CSI performed all these actions, and conducted the source test early, on October 6, 2023. AirKinetics, the source test company, concluded that the #2 Boiler passed, achieving the 5 ppm NOx standard. After three years of dedicated effort and millions of dollars spent, CSI believed it had solved the issues with the #2 Boiler. CSI provided the source test report to the District for approval of the result, which would have allowed CSI to terminate the variance. However, on November 16, the District sent CSI an evaluation concluding otherwise; the District reviewed the calculations and found that the NOx results were actually slightly above 5 ppm (5.2 ppm). Applying a "10% margin of error", the District deemed compliance to be "indeterminate", and requested re-testing. Disappointed by this conclusion, CSI sent a letter to the District explaining why, based on accepted mathematical rounding principles, CSI did, in fact, pass (the argument was that common practice is to round the results to the level of precision given in the rule, i.e., round down to 5 for any result of 5.4 or less and round up to 6 for a result of 5.5 or higher). The District considered CSI's position, but ultimately stuck to its original decision that compliance was "indeterminate." CSI continues to press its view that it has passed the source test and achieved compliance, but in the meantime needs to extend the current variance.

CSI disagreed with the District's decision on source testing, but, compliance being a core value for the Company, CSI decided to conduct a new source test. Source testing proceeded on December 1, however, preliminary results were indicating the value would be similar to the test the District had already deemed "indeterminate" (values were hovering just above 5). Given the District's position on

rounding, and not having confidence the final result would satisfy the District, CSI decided to abandon the source test and re-consider its options.

CSI has concluded that the #2 Boiler needs a new burner. Three years of modifications, tuning, and replacing ancillary parts has unfortunately not resulted in a Boiler that can achieve the 5 ppm NOx limit, at least not according to the District's position on rounding (numbers are usually just above 5 ppm). The numbers are very close – as described above the last completed source test had a value of 5.2 ppm. CSI believes a new burner will achieve 5 ppm standard.

CSI now requests the following relief: CSI requests to extend the variance to allow the continued operation of the #2 Boiler until October 31, 2024. This will allow sufficient lead-time for CSI to purchase, install, and commission a brand new burner for the #2 Boiler. This modification is justified because:

– After doing everything in its power to achieve compliance with the 5 ppm limit, even to the point of believing it had succeeded, CSI has no options remaining other than a replacement of the burner itself.

– To maintain its operations, CSI has a significant need for steam, which boilers provide, and insufficient steam is produced using only one boiler (CSI long ago passed the source test for its #1 Boiler, so it operates normally). If variance relief is granted, the #2 Boiler will operate until a new burner is installed.

– CSI exhausted all options to find an equivalent rental boiler. While some smaller units may become available, the full-scale temporary rental boilers CSI once used are no longer available. After making numerous inquiries, there are no equivalent rental boilers that have permits to operate in the AQMD. Plus, any rental boiler would risk putting CSI over the 12-month time limit for rental equipment, since CSI already used a rental boiler for several months. Thus, CSI must operate the #2 Boiler.

– CSI will agree to Conditions designed to minimize excess emissions to the maximum possible extent.

Overview of Operations and Need for Boilers

CSI is the leading producer of steel in the western United States, producing flat rolled steel sheet and electric resistance welded steel pipe. CSI's steel is sold to customers for use in producing a wide range of products, including metal buildings, structures, construction-related products, office furniture, metal containers, and other metal products.

The facility receives raw steel slabs by rail. The slabs are heated in furnaces and processed into sheet steel. The sheet steel is further processed into either steel coil or pipe products. Steel coil products may be further processed by pickling, which is a chemical surface treatment that removes surface scale from the outside of the steel coil. Some pickled steel coil products are further treated by galvanizing, which applies a protective coating to prevent rust. In order to pickle and galvanize steel, CSI relies on process steam that is generated from boilers. If CSI cannot produce pickled steel, then it also cannot produce galvanized steel because any galvanized steel first has to be pickled. The boilers are therefore essential to CSI's entire operation – the inability to use the boilers would result in a catastrophic loss of business, amounting to at least \$750,000 per day in lost revenue, and breaches of contracts for the delivery of pickled and galvanized products. Steel coil and pipe is then sent to customers either by truck or rail for further processing into end products.

Legal and Procedural Background

CSI's #1 and #2 Boilers are governed by Rules 1146 and 1100. Rule 1146 sets an emission standard of 5 ppm NOX @ 3% O2, and Rule 1100 specifies that boilers meeting this emission standard must be installed by January 1, 2023. Starting in 2019, CSI worked diligently to satisfy this deadline by submitting permit applications, obtaining bids, designing the boilers, issuing purchase orders, having vendors fabricate the boilers and the burners, arrange for delivery, and installing the boilers. Despite its best efforts, CSI had to apply for a variance (Case No. 4624-22) requesting additional time to install and test the #1 and #2 Boilers. This variance was granted, allowing CSI to install the #1 and #2 Boilers and

operate an older existing boiler under certain conditions. The variance ended on March 31, 2023.

#1 Boiler ultimately was installed and passed a required source test, allowing it to operate normally sans variance relief. #2 Boiler continued to be above the 5 ppm limit, and thus CSI applied for a variance to operate the #2 Boiler until fixes could be implemented. This variance was granted on July 6, 2023, and ends on December 29, 2023.

CSI seeks further relief to operate #2 Boiler until October 31, 2024 while it orders, installs, and commissions a new burner to achieve the 5 ppm limit. This modification would also likely require certain new conditions on source testing in increments of progress, given that the relief requested herein would make the variance last longer than one year. Unfortunately, the timing of the events described herein means that the filing of this Petition was delayed and a hearing will occur after the December 29, 2023 final compliance date. With options for interim and emergency relief uncertain (*see, i.e.* H&S Code Section 42351), the only apparent avenue for relief appears to be to seek modification. Thus, CSI respectfully seeks retroactive relief to December 30, 2023. In the event the Board cannot issue this modification, CSI respectfully requests a Regular Variance, subject to satisfying the required findings in the Health & Safety Code. We appreciate the Board's consideration of this request.

Exhibits to Petition

- A. Existing Variance Minute Order
- B. October 2023 #2 Boiler Source Test Report
- C. November 16, 2023 District Source Test Report Evaluation
- D. December Monthly Variance Report

6. When did you first become aware that you would not be able to comply with the existing variance?

Date: The first date CSI learned of AQMD's determination regarding the source test was on November 16, 2023 – this date was already after the date listed in the Minute Order as the final day to request a modification and have a hearing before December 29. CSI sought to persuade the District of its passing source test, and reasonably believed it could still end the variance. On or about December 1, 2023, a culmination of aborted source tests and engineering tests indicated numbers just over 5 ppm, and thus not passing per AQMD's position on rounding. CSI attempted to resolve the issue with AQMD in good faith each day up through and including the date of this filing, but with no resolution, CSI ultimately decided that further Hearing Board relief was needed.

7. What part(s) of the existing variance are you unable to comply with (final compliance date, specific increments of progress, and/or conditions)? For each part with which you cannot comply, provide an explanation.

CSI needs to extend the final compliance date. CSI seeks until October 31, 2024. As set forth in response to Question 5, CSI has been diligent in pursuing options to achieve compliance for its #2 Boiler, but has as of yet been unsuccessful. CSI provided exhaustive detail on all of its efforts in prior variance petitions, hearing testimony and exhibits, incorporated herein by reference. CSI has taken every possible action over the past 3 years to achieve the NOx limit, including full engagement with the boiler manufacturer and various contractors. CSI has dedicated thousands of man-hours to this project, engaging in a non-stop effort to comply.

After having spent at least \$4,000,000 to purchase, tune, modify and fix the #2 Boiler, CSI has now concluded that its only remaining option is to replace the entire burner. This new burner will be expensive, and costs are being evaluated now.

[Empty box]

8 How do you intend to achieve compliance with the rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed and/or modifications or process changes to be made, a list of the dates by which the actions will be completed, and an estimate of total costs.

As noted in response to Question 5, CSI intends to order and install a new burner.

9. State the date by which you expect to achieve final compliance: October 31, 2024

If the regular variance is to extend beyond one year, you **must** include a **Schedule of Increments of Progress**, specifying dates or time increments for steps needed to achieve compliance. See District Rule 102 for definition of Increments of Progress.

Example:

- Permit application(s) will be submitted to the District by June 1, 2001.
- Contracts for the purchase of emission control systems will be awarded by August 1, 2001.
- On-site construction will be completed by September 8, 2001.

These Increments of Progress are subject to change before and at the hearing, but as of now, the following is expected:

- New Burner specifications finalized and burner ordered: January 31, 2024
- Burner delivered to CSI: May 31, 2024.
- Burner Installed/ Start of Commissioning: July 31, 2024
- Conduct Source Test: September 30, 2024
- Certify Final Compliance: October 31, 2024.

10. Estimate excess emissions, if any, on a daily basis, including, if applicable, excess opacity (the percentage of total opacity above 20%) during the variance period. If the variance will result in no excess emissions, go to No. 11.

Pollutant	(A)	(B)	(C)*
	Total Estimated Excess Emissions (lbs/day)	Reduction Due to Mitigation (lbs/day)	Net Emissions After Mitigation (lbs/day)
NOx	0.19	0	0.19

* Column A minus Column B = Column C

Excess Opacity: N/A %

11. Show calculations used to estimate quantities in No. 10, or explain why there will be no excess emissions.

If we assume a baseline of having a 5 ppm NOx boiler versus a 5.2 ppm NOx boiler, the calculation is as follows:

$$F_{dj} = 8,710 \text{ dscf/mmBtu}$$

$$V_j = 1,050 \text{ mmBtu/mmscf}$$

$$d_j = \text{fuel use (mmscf/hr)}$$

$$\text{NOx conversion factor}_{(68 \text{ deg F})} = 1.195 \times 10^{-7} \text{ lb NOx/ft}^3\text{exhaust}$$

$$\text{Boiler 2 Fuel Use} = 32.54 \text{ mmBtu/hr} / \left(\frac{1,050 \text{ mmBtu/mmscf}}{20.9} \right) = 0.0310 \text{ mmscf/hr}$$

$$\text{Emission} \left(\frac{\text{lb}}{\text{hr}} \right) = \text{PPMV} \times \left(\frac{1,050}{20.9 - O_2} \right) \times 1.195 \times 10^{-7} \times F_{dj} \times d_j \times V_j$$

Boiler 2 emissions (5 ppm NOx): 0.198 lb NOx/hr

Boiler 2 emissions (5.2 ppm NOx): 0.206 lb NOx/hr

Excess emissions:

$$(0.206 \text{ lb NOx/hr} - 0.198 \text{ lb NOx/hr}) \times 24 \text{ hr/day} = 0.19 \text{ lb NOx/day}$$

Excess emissions from the operation of Boiler No.2 are 0.19 lb NOx/day.

Note: All significant digits are carried through all calculations before rounding the result to the nearest 100th of a pound per day.

12. Explain how you plan to reduce (mitigate) excess emissions to the maximum extent feasible. If no excess emissions, skip to No. 13.

CSI will continue to tune and ensure proper operation of the burners for the # 2 Boiler, and follow all existing Conditions of the Variance.

13. Explain how you will monitor or quantify emission levels from the subject equipment or activity during the variance period and make such records available to the District. **Any proposed monitoring does not relieve RECLAIM facilities from missing data requirements.**

CSI will continue to monitor boiler D252, as required by its Title V operating permit, RECLAIM, and Rule 1146. Monitoring consists of:


- Monitoring fuel use through a non-resettable totalizing fuel meter.
- Performing a diagnostic emission check of NO_x, CO, and O₂ at least monthly or every 750 unit-operating hours as required by Rule 1146.

16. Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six (6) months? No Yes

Date of Complaint	Number of Complainant(s)	Nature of Complaint

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on 15. December. '23 at FONTANA, California


Signature

Harold E. Parker II
Print Name

ENGINEERING MANAGER
Title

EXHIBIT A

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MINUTE ORDER**

CALIFORNIA STEEL INDUSTRIES, INC
14000 San Bernardino Avenue
Fontana, CA 92335

Case No: 4624-23
Facility ID: 46268

Hearing Date: 07/06/2023

Hearing Type: Regular

Consent Calendar:

HEARING BOARD ACTION

Action: Granted

Starting Date: 07/06/2023

Ending Date: 12/29/2023

RULES

203(b) {from Permit Condition No. H23.7 and Administrative Condition E.8 (first sentence only) of facility Permit to Operate ID No. 046268}

1146(c)(1)

1146(e)(1)

2004(f)(1) {from Permit Condition No. H23.7 and Administrative Condition E.8 (first sentence only) of facility Permit to Operate ID No. 046268}

3002(c)(1) {from Permit Condition No. H23.7 and Administrative Condition E.8 (first sentence only) of facility Permit to Operate ID No. 046268}

EQUIPMENT DESCRIPTION

DEVICE/APPLICATION/PERMIT

Boiler No. 2

D252 A/N #617691

To determine compliance CONDITIONS

1. Petitioner shall contact Paolo Longoni (plongoni@aqmd.gov), within 24 hours of the start-up of Boiler Device ID D252.
2. Petitioner shall request expedited source test report review using Form 222-XST.
3. Petitioner shall, no later than December 1, 2023, conduct source test(s) pursuant to the approved source test protocol, to determine compliance, with NOx and CO, per Rule 1146, and permit conditions.
4. Petitioner shall notify South Coast AQMD (Attn: Sarai Rios at srios@aqmd.gov), no less than 10 days prior to the scheduled source test.
5. Petitioner shall, within 30 days of source test date, submit source test reports to South Coast AQMD (Attn: Sarai Rios at srios@aqmd.gov).
6. Petitioner shall adjust and tune the control system of Boiler Device ID D252, at least once a month, per the manufacturer's specifications, to maintain its ability to repeat the same performance at the same firing rate, during the variance period.
7. Petitioner shall keep and maintain fuel meter readings for Boiler Device ID D252, for the entire variance period.

- 8 Petitioner shall submit a monthly progress report to South Coast AQMD, (Attn: Sarai Rios at srios@aqmd.gov, and Paolo Longoni at plongoni@aqmd.gov) regarding the construction, installation and source testing of the Rule 1146, compliant boiler, including any delays that would impact the ability to come into compliance, with deadlines set forth in this Variance. In each monthly report, Petitioner shall include copies of fuel meter readings, for Boiler Device ID D252. The report shall be submitted within 7 days, following the end of each calendar month, commencing with the report for July 2023, due August 7, 2023.
- 9 Petitioner shall calculate excess emissions, for the period between 03/15/2023 (date of the initial source test) and the date a source test(s) is successfully completed, using the following emissions factors for Boiler Device ID D252: NOx =1.92 lbs/mmcf

PPMV	Dry Factor, dscf/mmbtu	Heat Value, mmbtu/mmcf	Conversion Factor/Multiplier	EF, lbs/mmcf
5.0	8,710	1,050	1.28	6.4
6.5*	8,710	1,050	1.28	8.32
Difference				1.92

* Based on the results from the source test conducted on 03/15/2023

These records shall be sent to South Coast AQMD staff (Attn: Sarai Rios at srios@aqmd.gov and Paolo Longoni at plongoni@aqmd.gov), on a quarterly basis, on the 15th of the following month, at the end of the previous quarter. The first report will be due on October 15, 2023.

- 10 Petitioner shall pay any excess emissions fees, on a quarterly basis, on the 15th of the following month, at the end of the previous quarter. The first payment will be due on October 15, 2023. The emission calculations shall follow the methodology, presented in Condition No. 9.
- 11 Petitioner shall achieve final compliance, no later than December 29, 2023.
- 12 Petitioner shall notify the Clerk of the Hearing Board, at clerkofboard@aqmd.gov, when final compliance is achieved.
- 13 Petitioner shall pay all applicable fees, to the Clerk of the Board on, or before December 29, 2023, or this variance shall be invalidated, pursuant to Rule 303(k).

EXCESS EMISSIONS

NOx: 1.40 lbs/day

Failure to comply, in full, with any and all conditions and increments of progress, may result in modification, or revocation of this order, by the Hearing Board, and/or enforcement actions, by the South Coast AQMD.

REMINDER

In the event petitioner will be unable to comply with the final compliance date, a petition requesting a modification and extension, of the variance, may be filed. To meet notice requirements, the petition **must** be filed, no later than **November 7, 2023**. In the event the hearing is not needed and taken off calendar, petitioner may request a refund of 50%, of the filing fee, however, petitioner will be responsible for the publication fee.

Present: Cynthia Verdugo-Peralta, Chair
Robert Pearman, Esq., Vice Chair
Micah Ali
Mohan Balagopalan

Representing the Petitioner: Olivier Theard, Attorney at Law

Representing the Respondent: Erika Chavez, Senior Deputy District Counsel

Witness for the Petitioner: Harold Parker, Engineering Manager

Petitioner's Exhibits:

- #1 - Minute Order, Case No. 4624-22 signed 12/14/22
- #2 - Diagram, Product Flow Diagram
- #3 - Permit to Operate No. 46268
- #4 - Permit to Construct Nos. R-G6154, G57494, and G55615
- #5 - Compliance Source Test Report for Device ID D251
- #6 - Compliance Source Test Report for Device ID D252
- #7 - Email from Theard to Chavez dated 4/26/23
- #8 - Table, Cost Sheet
- #9 - PowerPoint Presentation
- #10 - Proposed Findings and Decision

Motion: Verdugo-Peralta/Ali 4-0

Board
Review/Approval


Cynthia Verdugo-Peralta, Chair

Dated

07/20/23

Prepared by Altheresa Rothschild

EXHIBIT B

COMPLIANCE SOURCE TEST REPORT
CALIFORNIA STEEL INDUSTRIES, INC.
BOILER NO. 2

Source Location:

California Steel Industries, Inc.
14000 San Bernardino Avenue
Fontana, California 92335
Facility ID: 046268
Device ID: D252

Test Date: October 16, 2023
Issue Date: October 23, 2023

Prepared for:

California Steel Industries, Inc.
14000 San Bernardino Avenue
Fontana, California 92335


Prepared by:

AirKinetics, Inc.
An affiliate of Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, CA 92705
(714) 254-1945
Report No.: W041AS-021835-RT-5313



REVIEW AND CERTIFICATION

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

Signature:  Date: 10/20/2023
Name: Craig Fry Title: Client Project Manager

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

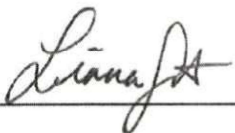
Signature:  Date: 10/20/2023
Name: Liana Ogata Title: Reporting QC Associate

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1.0 SUMMARY

1.1 Source Information

Plant Name and Address: California Steel Industries, Inc.
14000 San Bernardino Avenue
Fontana, California 92335

Facility ID No.: 046268

Source Tested: Boiler No. 2

Application No.: A/N 617691

Device ID No.: D252

Plant Contact: Alma Heustis
909-350-5973
Alma.Heustis@nucor.com

1.2 Testing Firm Information

Firm Name and Address: AirKinetics, Inc.,
An affiliate of Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705

Firm Contact: Craig Fry
714-254-1945
crfry@montrose-env.com

Test Personnel: Craig Fry, Client Project Manager
Jose Iniguez, Technician

1.3 Test Information

Test Requested By: California Steel Industries, Inc.

Firm Contact: Alma Heustis
909-350-5973
Alma.Heustis@nucor.com

Test Objective: To conduct a SCAQMD Rule 1146 emission testing program to verify operation in accordance with the SCAQMD Rule and the permit to construct emission limits for oxides of nitrogen (NO_x) concentration and carbon monoxide (CO) concentration

Test Date: October 16, 2023

Test Methods: SCAQMD 1.1 Sampling Points
SCAQMD 100.1 NO_x, CO, O₂, and CO₂

Agency Contact: Bill Welch
SCAQMD
909-396-2243
bwelch@aqmd.org

1.4 Subcontractors: Subcontractors were not used for this project

2.0 TEST RESULTS AND DATA PRESENTATION

The test program results are summarized in Table 2-1. All data pertaining to the tests are included in the appendices of this report. Boiler 2 NO_x, CO, O₂, and CO₂ results, and field data are presented in Appendix A. Reference method QA/QC calibration information are presented in Appendix B. Facility information is presented in Appendix C. Sampling method descriptions and schematics are presented in Appendix D. The Statement of No Conflict of Interest, LAP Approval Certificate, AETB and QI Certifications are presented in Appendix E.

**TABLE 2-1
 TEST RESULTS**

BOILERS	PARAMETERS	UNITS	RESULTS	LIMIT	RULE
Boiler No. 2 (D252)	NO _x	ppm@3%O ₂	5	5	1146
	CO	ppm@3%O ₂	0* (6)**	50	1146

* Negative results are reported as zero (0).

**The measured CO concentrations were below 20% of the analyzer's range and should be considered qualitative. Actual values are presented as well as values equal to 20% of the analyzer's range in parentheses. Compliance was demonstrated, since the values equal to 20% of the analytical range were below the emission limit.

3.0 INTRODUCTION

On October 16, 2023, AirKinetics, Inc. an affiliate of Montrose Air Quality Services, LLC conducted a source test program for California Steel Industries, Inc. in Fontana, California. The test objective was to conduct a SCAQMD Rule 1146 emission testing program to verify operation in accordance with the SCAQMD Rule and the permit to construct emission limits for oxides of nitrogen (NO_x) concentration and carbon monoxide (CO) concentration testing was conducted on Boiler No. 2.

AirKinetics certifies that the independent testing laboratory criteria established in District Rule 304(k) (1), (2), (3), and (4) are satisfied and that no conflict of interest exists between parties involved in the test program per District Rule 304.

4.0 SOURCE PROCESS AND EQUIPMENT DESCRIPTION

4.1 Process Description

The newly installed Boiler is a Williams and Davis, Model 4800W-150S, natural gas fired, fire tube type with low NOx burners. 32.54 MMBtu/hr. The boilers supply steam to the CPL and 5stand

4.2 Location Description

A summary of the test location information is presented in Table 4-2. A sampling location schematic is presented in Appendix C.1.0.

**TABLE 4-2
 TEST LOCATION INFORMATION**

Location	Dimensions (inches)	Cross Sectional Area (in ²)	Sampling Location			
			Downstream from Flow Disturbance (B) *		Upstream from Flow Disturbance (A)*	
			Inches	Equivalent Diameters	Inches	Equivalent Diameters
Boiler No. 2 (D252)	36.0 ID	1017.9	228	6.33	76	2.11

* (A) and (B) refer to the schematics in Appendix C.1.0.

4.3 Process Operation

A summary of the process operation information is presented in Table 4-3.

**TABLE 4-3
 PROCESS OPERATION INFORMATION**

Equipment	Parameter	Boiler No. 2
Boiler No. 2 (D252)	Continuous or Demand Based	Continuous
	Operation (i.e. Normal)	Normal
	Fuel Flow Rate, scfh	22,273

5.0 SAMPLING AND ANALYTICAL PROCEDURES

A list of the sampling and analytical procedures employed during this test program is presented in Table 5-1. Sampling method descriptions and schematics are presented in the Appendix D.

TABLE 5-1
SAMPLING AND ANALYTICAL PROCEDURES

Parameter	Test Method
Traverse Points	SCAQMD Method 1.1
NO _x , CO, O ₂ , and CO ₂	SCAQMD Method 100.1

6.0 TEST CRITIQUE

The measured CO concentrations were below 20% of the analyzer's range and should be considered qualitative. Actual values are presented in Table 2-1 as well as values equal to 20% of the analyzer's range in parentheses. Compliance was demonstrated, since the values equal to 20% of the analytical range were below the emission limit.

No other anomalies occurred during this test program.

APPENDIX A

BOILER NO. 2

1.0 NO_x, CO, O₂, and CO₂

a. Results Tabulation and Calculations

CLIENT NAME: California Steel Industries, Inc.
 PLANT NAME: California Steel Industries, Inc.
 TEST LOCATION: Boiler No. 2
 CITY/STATE: Fontana, CA

JOB NUMBER: PROJ-021835
 RUN NO.: 1
 TEST DATE: 10/16/23
 RUN TIME: 905-1005

TEST DATA

VARIABLE	DESCRIPTION	Pollutant 2	Pollutant 3	Diluent 1	Diluent 2
		NOx	CO	O2	CO2
A	ANALYTICAL RANGE	10	25	10	20
	Unit of Measurement	ppmd	ppmd	% dry	% dry
	CALIBRATION GAS INFORMATION				
B	Zero Gas	0.00	0.00	0.00	0.00
C	Mid Gas Concentration	4.61	12.82	4.98	9.00
	Mid Gas Cylinder S/N:	CC434962	CC222303	CC104707	CC104707
D	High Gas Concentration	9.31	22.49	8.92	17.90
	High Gas Cylinder S/N:	EB0063464	CC345861	CC198572	CC198572
E	UPSCALE CALIBRATION GAS USED	4.61	22.49	4.98	9.00
	L=Low, M=Mid, H=High	M	H	M	M
	INITIAL CALIBRATION ERROR TEST				
F	Zero Gas Response	0.01	0.05	-0.02	0.01
G	Mid Gas Response	4.61	12.86	5.00	9.04
H	High Gas Response	9.31	22.54	9.00	17.89
	INITIAL SYSTEM CALIBRATION CHECK				
I	Zero Gas Response	-0.02	0.22	0.02	0.18
J	Upscale Gas Response	4.58	22.12	4.90	9.05
	FINAL SYSTEM CALIBRATION CHECK				
K	Zero Gas Response	0.03	-0.07	-0.01	0.22
L	Upscale Gas Response	4.61	22.37	4.90	9.00
	FINAL CALIBRATION ERROR CHECK				
M	Zero Gas Response	-0.01	-0.04	-0.05	0.07
N	Mid Gas Response	4.60	12.80	4.95	8.98
O	High Gas Response	9.27	22.46	8.99	17.76
	x				
P	AS MEASURED FLUE GAS CONCENTRATION	4.69	-0.14	4.58	9.37

← Out of Range! Additional Cal. Gas Required at x

CALCULATIONS

	AVERAGE SYSTEM CALIBRATION	FORMULA				
Q	Zero Response	0.01	0.08	0.01	0.20	(I+K)/2
R	Upscale Response	4.60	22.25	4.90	9.03	(J+L)/2

	CORRECTED CONC	FORMULA				
S		4.70	-0.22	4.65	9.35	E*(P-Q)/(R-Q)

← Out of Range! Additional Cal. Gas Required at x

QA/QC CALCULATIONS

CALIBRATION GAS SELECTION, % of Range					
Mid Gas	46.1	51.3	49.8	45.0	C*100/A
High Gas	93.1	90.0	89.2	89.5	D*100/A
CALIBRATION ERROR, % of Range					
Initial Zero Gas Error	0.10	0.20	-0.20	0.05	(F-B)*100/A
Initial Mid Gas Error	0.03	0.16	0.20	0.20	(G-C)*100/A
Initial High Gas Error	0.04	0.20	0.77	-0.05	(H-D)*100/A
Final Zero Gas Error	-0.10	-0.16	-0.50	0.35	(M-B)*100/A
Final Mid Gas Error	-0.07	-0.08	-0.30	-0.10	(N-C)*100/A
Final High Gas Error	-0.36	-0.12	0.67	-0.70	(O-D)*100/A
LINEARITY, % of Range					
Initial	-0.04	-0.04	-0.14	0.20	((G-F)-[(H-F)*C]/D)*100/A
Final	0.16	0.06	-0.45	0.08	[(N-M)-[(O-M)*C]/D]*100/A
SAMPLING SYSTEM BIAS, % of Range					
Initial Zero Gas Bias	-0.30	0.68	0.40	0.85	(I-F)*100/A
Initial Upscale Gas Bias	-0.30	-1.68	-1.00	0.05	(J-G)[or G, or H]*100/A
Final Zero Gas Bias	0.40	-0.12	0.40	0.75	(K-M)*100/A
Final Upscale Gas Bias	0.10	-0.36	-0.50	0.10	(L-N)[or N, or O]*100/A
CALIBRATION DRIFT, % of Range					
Zero	0.50	-1.16	-0.30	0.20	(K-I)*100/A
Upscale	0.30	1.00	0.00	-0.25	(L-J)*100/A

REFERENCE METHOD DATA SUMMARY

2 of 3

Client Name: California Steel Industries, Inc.
 Plant Name: California Steel Industries, Inc.
 City, State: Fontana, CA
 Test Location: Boiler No. 2
 Job Number: PROJ-021835

Run Information			Moisture	Flue Gas Composition				Pollutant 2: NOx (MW: 46 lb/lb-mole)		Pollutant 3: CO (MW: 28 lb/lb-mole)	
				Flow Rate:		O2	CO2	dry	dry ppm	dry	dry ppm*
No.	Date	Time	%	dry scfm	dry scfh	dry %	dry %	ppm	@ 3%O2	ppm*	@ 3%O2
1	10/16/23	905-1005	14.42	4587	275234	4.65	9.35	5	5	0	0

*Negative results are reported as zero (0.00).

Based on Standard

Conditions of:

60 deg. F and
 29.92 in. Hg

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REFERENCE METHOD DATA SUMMARY

Client Name: California Steel Industries, Inc.
 Plant Name: California Steel Industries, Inc.
 City, State: Fontana, CA
 Test Location: Boiler No. 2
 Job Number: PROJ-021835

20% of 25ppmCO Analytical Range

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Run Information			Flue Gas Composition				Pollutant 3: CO (MW: 28 lb/lb-mole)	
No.	Date	Time	Moisture %	Flow Rate: dry scfm	O2 dry %	CO2 dry %	dry ppm	dry ppm @3%O2
1	10/16/23	905-1005	14.42	4587	4.65	9.35	5	6

* Based on Standard
 Conditions of:
 60 deg. F and
 29.92 in. Hg

EXAMPLE CALCULATIONS, RUN No. 1

OXYGEN CORRECTED CONCENTRATION

$$\text{dry ppm @X\%O}_2 = (\text{concentration, dry ppm}) * \left(\frac{20.9 - X}{20.9 - \%O_2 \text{ dry}} \right)$$

$$\text{ppmNO}_x@3\%O_2 = (4.70235185185185) * (20.9 - 3)/(20.9 - 4.65) = 5.2$$

$$\text{ppmCO@3\%O}_2 = (0) * (20.9 - 3)/(20.9 - 4.65) = 0.0$$

EXHIBIT C

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS /DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

ST ID: **PR22244**

FACILITY ID NO.: **46268** *A/N:* 617691

COMPANY: **California Steel Industries, Inc., Fontana**

EQUIPMENT: **One (1) Natural Gas-Fired Boiler, 32.54 MMBTU/Hr (D252)**

LOCATION: **1 California Steel Way, Fontana, CA 92335**

REQUESTED BY: **Sarai Rios (Memo Dated October 25, 2023)**

TYPE OF TEST: **PERFORMANCE/COMPLIANCE REPORT**

DOCUMENT DATE: **October 23, 2023**

REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS):
- Rule 1303 & BACT: CO 50 ppm @ 3% O₂
- Rule(s) 2012 & 1146: NO_x 5 ppm @ 3% O₂, Flow RAA 15%

REQUESTED EVAL: **CO, NO_x**

TEST DATE: **October 16, 2023**

TEST FIRM: **AirKinetics, Inc.**

STE EVALUATOR: **Ryan Richards EXT: 2265** *REVIEW DATE:* **November 9, 2023**

SOURCE TEST REPORT EVALUATION

OVERVIEW OF EVALUATION:

OVERALL
CONFIDENCE IN
REPORTED TEST
RESULTS:

ACCEPTABLE **CONDITIONALLY
ACCEPTABLE:
CO COMPLIANT, NO_x
INDETERMINATE** UNACCEPTABLE

RESTRICTIONS FOR
USE OF REPORTED
RESULTS:

- RAA reported accuracy of the fuel flow meter (%) may be used for compliance and emission calculations.
- NO_x emissions, as reported in Table 2-1 indicated compliance. However, based on uncorrected NO_x concentration of 4.70 ppm reported on page 11, the NO_x @ 3% is 5.2 ppm as reported on page 14. Therefore, the reported NO_x concentration was above the Rules/Permit Compliance Limits of 5 ppm @ 3% O₂ but within the 10% "margin of error."¹ Please refer to Detailed Review section for additional information.
- CO emissions, as reported, should not be used for compliance determination and/or emission calculations, without the adjustments specified in the next section of this evaluation.

COMPLIANCE
DETERMINATION:

- RAA accuracy of the fuel flow meter (%) is less than or equal to 15%, as reported, and is in compliance by an acceptable margin with the Rules/Permit Compliance Limits specified above.
- CO emissions, as adjusted (see next section of this evaluation), are in compliance by an acceptable margin¹ with the Rules/Permit Compliance Limits specified above.
- Compliance was indeterminate for NO_x reported emissions since it was above the compliance limit but within the 10% "margin of error" and a re-test will be necessary.

(REFER TO NEXT SECTION FOR COMPLETE DISCUSSION OF TEST RESULTS AND CORRECTED EMISSION INFORMATION, IF APPLICABLE)

¹ **NOTE:** STE assigns a 10% "margin of error" to most compliance limits when evaluating emissions for compliance determination. This is due to uncertainties assigned to source testing, in general, and errors associated with individual analytical procedures. As a result, some reported emissions may be judged as being in compliance although they appear to be non-compliant or marginally non-compliant. Similarly, non-compliance is judged using the same margin-of-error.

SOURCE TEST REPORT EVALUATION**DETAILED REVIEW**

This source test report has been reviewed by the Source Test Engineering Branch staff. The following specifically explains the restrictions concerning the treatment of the reported source test information:

- Completeness of Application/Protocol/Report
- Representativeness of Data & Process
- Rule/Permit Fulfillment
- Sampling & Analytical Methods
- Quality Assurance
- Calculations

REPRESENTATIVENESS OF DATA & PROCESS

- As mentioned by AirKinetics, Inc., some of the reported gaseous emissions fell short of established analytical standards, and they have been recalculated upward to default levels for qualitative compliance determination only. This applies to reported CO concentrations and mass emissions. Please see tables on next page. South Coast AQMD regards the valid reporting range of measurement of a Method 100.1 gas analyzer as being 20-95% of the instrument full-scale-range (FSR). Gas measurements (as measured at the stack) falling below this lower limit are adjusted upward to the 20% FSR value for gas concentration Rule/Permit Compliance limit determination only, and adjusted CO values cannot be used quantitatively for mass emission or emission factor calculations because they are probably overstated.

RULE/PERMIT FULFILLMENT

Testing must satisfy the following Rule/Permit requirements:

- Rule 1303 & BACT: CO 50 ppm @ 3% O₂
- Rule(s) 2012 & 1146: NO_x 5 ppm @ 3% O₂, Flow RAA 15%

All required testing has been performed and is properly formatted, except where noted in this evaluation.

SAMPLING & ANALYTICAL METHODS / RESULTS

- NO_x emissions, as reported in Table 2-1 indicated compliance. However, based on uncorrected NO_x concentration of 4.70 ppm reported on page 11, the NO_x @ 3% O₂ is 5.2 ppm as reported on page 14. Therefore, the reported NO_x concentration was above Rules/Permit Compliance Limits of 5 ppm @ 3% O₂ but within the 10% "margin of error".

QUALITY ASSURANCE

- All reported testing results were well supported and documented with respect to raw data, calibrations, calculations, and lab analyses.

SOURCE TEST REPORT EVALUATION

CALCULATIONS

Boiler #2, California Steel Industries, Inc., Facility ID 46268, Test Date: October 16, 2023				
Parameter	Units	Test Run Avg		Permit/Rule Limit
		Reported Results	Corrected Results	
$NO_x^{(1)}$	ppmv @ 3% O_2	5.20	5.18	5
$CO^{(2)}$	ppmv @ 3% O_2	6.00	5.50	50
Flow RAA	%	4.8	5.8	-
⁽¹⁾ Above compliance limit but within 10% "margin of error". ⁽²⁾ Adjusted upward to 20% FSR.				

REMEDIATION

Compliance was indeterminate for NO_x reported emissions since it was above the compliance limit but within the 10% "margin of error" and a re-test will be necessary.

EXHIBIT D

Variance Progress Report - November 2023

Facility: California Steel Industries, Inc.
 Facility ID: 46268
 Case No. 4624-23

Variance Order Conditions:

- 7 Petitioner shall keep and maintain fuel meter readings for Boiler Device ID D252, for the entire variance period.
- 8 Petitioner shall submit a monthly progress report to South Coast AQMD, (Attn: Sarai Rios at srios@aqmd.gov and Paolo Longoni at plongoni@aqmd.gov) regarding the construction, installation and source testing of the Rule 1146, compliant boiler, including any delays that would impact the ability to come into compliance, with deadlines set forth in the Variance. In each monthly report, **Petitioner shall include copies of fuel meter readings for Boiler Device ID D252**. The report shall be submitted within 7 days following the end of each calendar month, commencing with the report for July 2023, due August 7, 2023.

Summary of Activities:

- For source test performed 10/16/23, received SCAQMD Conditionally Acceptable; CO compliant, NOx Indeterminate Source Test Report Evaluation. Evaluation stated "Compliance was indeterminate for NOx reported emissions since it was above the compliance limit but within the 10% "margin of error" and a re-test will be necessary".
- Source test re-test performed on 12/01/23. Hand-held devices indicated compliance, but preliminary results from AKI did not show lower NOx than source test performed on 10/16/23; therefore test was not completed while CSI evaluates options.
- CSI remains under variance coverage, with no violations. Official source test was conducted on 10/16/23.

Boiler D252 Fuel Meter Readings

Date	Meter reading (scf)	Note
7/6/2023	135,592,284	Variance began
7/20/2023	135,592,284	Final meter reading before meter replacement
7/20/2023	28	Beginning meter reading on replacement meter
7/26/2023	28	End of month meter reading
8/29/2023	6,006,674	
9/28/2023	14,167,379	
10/26/2023	18,015,668	
11/30/2023	25,465,140	

Month	Fuel Use (scf)
Jul 2023	0
Aug 2023	5,983,980
Sep 2023	8,129,910
Oct 2023	3,833,767
Nov 2023	7,421,361

Notes:

- Existing fuel meter was replaced on 7/20/23.
- The replacement meter was calibrated on 7/18/2023
- Note that while the D252 boiler started up on 7/28/2023, the final meter reading for the month was taken on 7/26/2023, so fuel consumption after startup was not captured in July; this fuel consumption is included with August's fuel use.

Angel Walker Smith

From: Olivier Theard
Sent: Friday, December 15, 2023 2:37 PM
To: 'clerkofboard@aqmd.gov'
Cc: Erika Chavez
Subject: California Steel Petition
Attachments: Petition for Modification of an Existing Variance Before the Hearing Board of the SCAQMD, 4855-8916-0599 v 1.pdf

Dear Clerk of the Board:

Attached is a Petition for Modification in Case 4624-23. I also check the "Other" box for a Regular Variance, depending on the relief the Hearing Board feels is best suited to the situation (assuming we make our case).

I am also sending hard copies to the District via Fedex. A check for the filing fee will be included with the Fedex package.

In terms of a Hearing Date: We are amenable to a hearing in late January or early February, depending on Board availability, District Counsel's schedule, and the need for statutory notice. Please note: I will be out of the Country in France for a family reunion from January 18 – 26.

Have a great day, and an even better weekend.

-Olivier-

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