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October 7, 2022

Via Email

Marcy Hiratzka
Clerk of the Hearing Board
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: **Schnitzer Steel Industries, Inc. -- Application for Short Term and Interim Variance**

Dear Ms. Hiratzka:

On behalf of Schnitzer Steel Industries, Inc., please find enclosed for filing with the Bay Area Air Quality Management District Hearing Board an Application for Short Term and Interim Variance. A check in the amount of $8,862, payable to the Bay Area Air Quality Management District, has been issued and is being sent via U.S. Mail to cover the filing fees. Given the urgency of the issue, we would greatly appreciate if this matter can be scheduled for hearing as soon as possible. Schnitzer is available for hearing on October 18 or October 25, if either of those dates is available.

Thank you very much.

Very truly yours,

Meg Rosegay

Margaret Rosegay

cc: Marcia Raymond, Assistant Counsel, BAAQMD
Stanley N. Alpert, Assistant General Counsel, Environmental, Schnitzer Steel
Scott B. Sloan, Vice President, Corporate Environmental, Schnitzer Steel
Gary Rubenstein, Foulweather Consulting

BEFORE THE HEARING BOARD
OF THE
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
STATE OF CALIFORNIA

APPLICATION FOR VARIANCE

In the Matter of the Application of

Schnitzer Steel Industries, Inc.

(Applicant: Insert business or organization name above)

For a Variance from Regulation(s):

Permit Condition 27410(8) of ATC Appl. # 30009; Permit Condition 27410(8) of PTO # A0208; Regulation 2, Rule 1, Section 302; and Regulation 2, Rule 1, Section 307

(Applicant: Insert Regulations in form: Regulation ___, Rule ___, Section ___)

DOCKET NO. 3737
(Assigned by Clerk)

TYPE OF VARIANCE REQUESTED (see Page 3 for further information)

☐X SHORT ☐X INTERIM ☐ REGULAR ☐ GROUP ☐ PRODUCT

VARIANCE PERIOD REQUESTED (see Page 10, No. 20):

From: October 7, 2022 To: December 31, 2022

TOTAL NUMBER OF (CALENDAR) DAYS IN VARIANCE PERIOD: 86

(Note: Variance relief will not be granted for any period preceding the date of filing of the Application for Variance.)

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

SUMMARY PAGE

NAME OF APPLICANT: Schnitzer Steel Industries, Inc.

FACILITY ADDRESS: 1101 Embarcadero West

City, State, Zip: Oakland, CA 94607-2590

PLANT # or G #: A0208 SOURCE #(S):

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

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BRIEFLY SUMMARIZE EQUIPMENT/ACTIVITY SUBJECT TO THIS VARIANCE REQUEST:

Schnitzer's BAAQMD Permit to Operate currently limits the number of ships that may call at its Oakland, CA scrap metal recycling facility to 26 ships per calendar year. (This same condition is contained in Authority to Construct, Application No. 30009, issued to Schnitzer for installation of two regenerative thermal oxidizers and acid gas scrubbers at the facility.) This limit on the number of ships was imposed solely to enforce an assumption in a 2009 BAAQMD CEQA analysis, and is not otherwise required to comply with any BAAQMD regulation. The ships are used to deliver finished metal products to Schnitzer's customers, most of whom are located in foreign countries. The ability to ship finished product from the facility by ship is essential to Schnitzer's ability to conduct business.

Beginning in 2018, Schnitzer's customers started using smaller ships to accommodate shallow draft conditions in foreign ports where the material is delivered, thus necessitating an increase in the number of ships required to move the same quantity of product. In addition, some ships began serving more than one facility, meaning that Schnitzer was unable in all cases to fully load a ship with its product. To address these changed circumstances, Schnitzer applied for a modification of its Permit to Operate in July 2018 to increase the number of allowable ship calls from 26 to 32 per year so that it would continue to operate in compliance with its permit. Schnitzer has been waiting over four years for the District to issue the modified permit which, as of the date of this Application, remains outstanding. Schnitzer's application was complete on January 31, 2019 pursuant to BAAQMD Rule 2-1-432 and is

approvable by the District. There is no District regulation barring modification of the permit as requested by Schnitzer.

The sole reason for this extreme delay is the District's inability to timely comply with the requirements of the California Environmental Quality Act (CEQA). For reasons that are wholly outside Schnitzer's reasonable control, the District, as lead agency under CEQA, has been unable to complete the CEQA process in a timely manner, precluding issuance of the modified permit.

To address the inherent inequity caused by this situation, the District entered into Compliance and Settlement Agreements with Schnitzer in 2018, 2020 and 2021 that allowed increased ship calls subject to Schnitzer's payment of excess emission fees and a civil penalty for each additional ship, not to exceed a total of 32 ships per year. Schnitzer timely paid excess emission fees and penalties to the District for each of these years and operated in accordance with the terms and conditions of the Compliance and Settlement Agreements. (Due to market conditions in 2019, no additional ships were required in that year.)

For reasons that have not been communicated to Schnitzer, the District declined to renew the Compliance and Settlement Agreement for Calendar Year 2022 notwithstanding the fact that its permit application is still pending. Schnitzer has been advised that the CEQA process — which has been ongoing since 2019 — has still not been completed and that the District lacks sufficient experienced CEQA staff to be able to complete the process this year, thus preventing issuance of the modified permit for yet another year. Schnitzer has no means of rectifying this permitting conundrum. Faced with these extenuating circumstances beyond its control, Schnitzer seeks a Short Term and Interim Variance from the Hearing Board to allow a total of up to six (6) additional ships to call at the Oakland facility in Calendar Year 2022. The 26th ship is currently scheduled to arrive at the facility on October 10, 2022, after which no further ships will be allowed unless the Hearing Board grants the requested relief.

LIST DISTRICT REGULATIONS, RULES AND PERMIT CONDITIONS SUBJECT TO THIS VARIANCE REQUEST:

App. 30009, Authority to Construct, Condition 27410, Part 8	Annual Facility Permit to Operate, Condition 27410, Part 8
Rule 2-1-302	Rule 2-1-307

SUMMARY OF TOTAL EXCESS EMISSIONS:

Pollutants	Net Emissions After Mitigation (lbs/day or Opacity %)
Carbon Monoxide	0.076 tons/ship; maximum of 0.454 tons
Oxides of Nitrogen	0.656 tons/ship; maximum of 3.935 tons

Sulfur Dioxide	0.013 tons/ship; maximum of 0.076 tons
Precursor Organic Compounds	0.031 tons/ship; maximum of 0.186 tons
Diesel Particulate Matter/PM10/PM2.5	0.015 tons/ship; maximum of 0.089 tons

TYPE OF VARIANCE REQUESTED:

NOTE: The date of filing of the Application for Variance is the earliest allowed starting date for a variance. State law [California Health and Safety Code (H&SC)] imposes requirements on the amount of time to be allowed for notification of the public and air quality regulatory agencies before a hearing on a variance request can be held by the Hearing Board. Review the following descriptions of the types of variances, and select that which is most appropriate for your situation:

SHORT: If compliance with the District Rule(s) can be achieved in **90 (calendar) days or less**, request a short-term variance. [10-day notice required to Bay Area Air Quality Management District's Air Pollution Control Officer (APCO), Applicant, California State Air Resources Board (ARB), Federal Environmental Protection Agency (EPA).]

INTERIM: If Applicant requires immediate relief for the period between the date of filing of variance application and the date of the decision on the matter by the Hearing Board, request an interim variance. An interim variance is recommended if significant excess emissions will occur between the date of filing and the date of the fully noticed hearing by the Hearing Board. If an interim variance is required, a hearing will be scheduled as soon as possible. The period of an interim variance shall not exceed 90 days. If an interim variance is requested, Applicant must also request a short or a regular variance on the same application.

REGULAR (OR LONG-TERM): If compliance with District Rule(s) will take **more than 90 (calendar) days**, request a regular variance. *(30-day published notice required. 30 days notice to APCO, Applicant, ARB.)*

GROUP: If non-compliance with District Rule(s) by each individual Applicant comprising a group is based on issues of law and fact common to each Applicant, request a group variance. *(Noticing requirements as for Short or Regular variances depending on period of the Group variance.)*

PRODUCT: Any person who manufactures a product may petition the Hearing Board for a product variance from a District Rule or Regulation. A product variance shall be granted only when a variance is necessary for the sale, supply, distribution, or use of the product. *(Noticing requirements as for Short or Regular variances depending on period of the product variance.)*

BAAQMD Regulation 1-402: **"Status of Violation Notices During Variance Proceedings:** Where a person has applied for a variance, no notices shall be issued during the period between the date of filing for the variance application and the date of

decision by the Hearing Board for violations covered by the variance application. However, during the period between the date of the filing for a variance and the date of decision by the Hearing Board, evidence of additional violations shall be collected and duly recorded. Where the variance is denied, evidence of violations collected between the filing date and decision date shall be reviewed and a notice of violation issued for violations occurring during that period shall be served upon said person. Where the variance is granted, no notice of violation shall be issued for violations occurring during that period except in extraordinary circumstances as determined by the APCO."

NOTE: The Environmental Protection Agency (EPA), a federal agency, does not recognize California's variance process, which is established by state law. The EPA considers facilities operating under a variance to be operating in violation of District regulations. Facilities that are in violation and then obtain a variance are advised that the EPA can independently pursue legal action based on federal law against the facility for continuing to be in violation.

1. Briefly describe the type of business and processes at your facility (Attach a map showing location)

Schnitzer owns and operates a large metal shredding and recycling facility in the Port of Oakland. Schnitzer purchases end-of-life vehicles, household appliances and other forms of scrap metal from myriad sources throughout California and processes the material using a variety of technologies to produce finished ferrous and non-ferrous metal commodities that are traded on the global metals market. On average, the facility produces approximately 525,000 tons of shredded ferrous iron ("shred") per year based on its annual throughput (intake) limit of 720,000 tons/year (applicable solely to the S-6 shredder), and it processes an additional 360,000-370,000 tons of "Heavy Melt Steel" (HMS) and "Bonus" that is too large or unwieldy to be processed by the shredder. There is no throughput limit on HMS or Bonus. Processes employed at the Oakland facility include metal shredding, magnetic separation, density separation, sorting, and shearing, among others. All scrap metal accepted by the facility for processing is subject to a strict Scrap Acceptance Policy and is de-polluted prior to processing as required by law. The Oakland facility is the largest metal shredding facility in the state and provides essential metal recycling services to industrial and commercial businesses, governmental entities, and consumers. Finished ferrous products are shipped from the facility by ocean-going vessels that call at the facility's private wharf and deliver products to foreign and domestic customers. Schnitzer has no other feasible means of delivering its ferrous products to its customers, most of whom are located in foreign countries. Over the past two years, the facility has shipped an average of almost 900,000 tons of metal to customers via ship.

See Small Business Considerations on Page 12, No. 21 before answering the following question:

Is Applicant a "Small Business" as defined by Health & Safety Code Section 42352.5(b)(1)? Yes ☐ No ☐X

Is Applicant a "Major Source" as defined by the applicable provisions of the Federal Clean Air Act, 42 U.S.C. Sec. 7661(2)? Yes ☐ No ☐X

NOTE: Schnitzer has completed installation of two Regenerative Thermal Oxidizers and Acid Gas Scrubbers that have reduced VOC emissions to significantly below Major Facility thresholds. Emissions of all other pollutants are below Title V thresholds. Following enclosure of its shredder in 2017 and quantification of captured emissions through source testing, Schnitzer timely filed a Title V Permit Application, as well as an application for Authority to Construct the RTOs and acid gas scrubbers to abate VOC emissions. Schnitzer also submitted an application for a Synthetic Minor Operating Permit that, upon issuance, will obviate the need for issuance of a Title V Permit.

Is Applicant a "public agency" as defined in Health & Safety Code Section 42352(b)? Yes ☐ No ☐X

2. Describe the equipment/activity for which a Variance is being sought (type of equipment/activity, source numbers, purpose, why is it essential to your business). Attach a copy of the BAAQMD Permit to Operate or Authority to Construct for the subject equipment and/or facility so long as such Permit is less than 50 pages. If the Permit is greater than 50 pages, all portions relevant to the Application shall be provided.

Schnitzer is seeking a variance from Condition 27410(8) of its Authority to Construct, (Application No. 30009) and Permit to Operate No. A0208 limiting the number of ships that may call at its facility on an annual basis (January 1-December 31). Copies of the ATC and PTO are attached as Exhibit A and Exhibit B, respectively. This Application for Short Term and Interim Variance seeks a modest increase in the allowable number of ships from 26 to 32 for Calendar Year 2022.

The need for additional ships is attributable to two factors, both of which are outside Schnitzer's reasonable control: (1) a reduction in the average rated deadweight tonnage (DWT) of ships that are available for dispatch to the Schnitzer facility due to draft limitations at the destination facilities, as dictated by the customers, and (2) the inability to fully load vessels with product produced at Oakland in cases where a portion of the ship's capacity is contractually reserved for scrap shipments at other facilities. Ships are used to export recycled metal products (primarily ferrous "shred," HMS and Bonus) produced by the facility to foreign and domestic customers and represent the only feasible means of delivering these products to market. Based on its need to use smaller ships, or its inability to fully load certain ships, Schnitzer applied to the District for a permit modification to increase its allowable ship calls from 26 ships/year to 32 ships/year, as more ships are needed to move the same amount of material. The permit application was submitted in July 2018. As discussed below, the permit modification has still not been issued.

Schnitzer contracts in advance with steel mills and other customers (end users) to deliver specific types and volumes of metal that are needed for their operations. Schnitzer would be in default of these contracts, and liable for liquidated or other damages, if unable to deliver product in accordance with the terms of those contracts. Inability to deliver its finished products to customers would also lead to the accumulation of huge inventories of material at the facility, posing serious logistical and operational challenges. With no allowable ship calls for the remainder of the year, the only viable way to avoid this build-up of inventory would be

to suspend operations for the duration of the year, with grave economic consequences and no commensurate benefit to air quality.

Please note that the facility is operating in compliance with its permitted throughput limit for the metal shredder (720,000 tons/year) and is not seeking to increase the amount of material that is shredded at the facility or otherwise processed during the remainder of 2022. The need for variance relief is limited to the number of ship calls specified in Condition 27410(8) and is based on circumstances that are beyond Schnitzer's reasonable control, namely: (1) the customers' specifications for smaller ships that are able to dock at destination facilities specified by the customers; (2) contractual commitments by third parties on a portion of the ships' capacity; and (3) the District's extremely lengthy delay in processing Schnitzer's July 2018 application to modify its Permit to Operate to increase the number of ship calls. Schnitzer timely provided all information requested by the District in connection with its application, and the application was complete in January 2019. Despite the passage of more than four years, the application is still pending due to the District's inability to complete the CEQA process which began in 2019. Schnitzer is not aware of any substantive grounds for denial of its application under BAAQMD regulations.

Schnitzer is requesting a Short Term Variance for the remaining 86 days of Calendar Year 2022 to allow up to an additional six (6) ships to call at the facility. Interim variance relief is also requested as Schnitzer anticipates that it will exceed its current permit limit of 26 ships after October 16, when the 26th ship for calendar year 2022 is scheduled to depart the facility (this ship is scheduled to arrive at the facility on October 10 and complete loading by October 16). The next ship is currently scheduled to arrive at the facility on October 30 or November 1. Schnitzer is required to requisition ships in advance in order to meet its contractual commitments to customers and will be subject to a significant financial penalty if forced to cancel this and subsequent ships.

Is there a regular maintenance and/or inspection schedule for this equipment?
Yes ☐ No ☐ Not applicable

If Yes, how often?

What was the date of the last maintenance and/or inspection? Not applicable

Are maintenance records available? Yes ☐ No ☐

Was there any indication of problems? Yes ☐ No ☐

APPLICANT'S PETITION FOR REQUIRED FINDINGS

California Health and Safety Code (H&S Code) 42352 requires the Hearing Board to make six findings for a variance to be granted. In this Section, Applicant must provide sufficient information to enable the Hearing Board to make a decision on each of the six findings:

Finding # 1: ***That the Applicant for a variance is, or will be, in violation of Health and Safety Code Section 41701 or of any rule, regulation or order of the District.***

3. List all District Regulations, Rules, and/or Permit Conditions from which Applicant is seeking variance relief. Briefly explain how Applicant is or will be in violation of each rule or condition. If Applicant is requesting relief from Regulation 6, and the excess opacity during the variance period will reach or exceed 40% (Ringelmann 2), Applicant should also request relief from California Health and Safety Code Section 41701.

Regulation, Rules, Permit Conditions	Explanation
App. 30009, Authority to Construct, Condition 27410, Part 8	This condition limits the facility to not more than 26 ship calls per year.
Annual Facility Permit to Operate, Condition 27410, Part 8	This condition limits the facility to not more than 26 ship calls per year.
Rule 2-1-302	Requires that a permit to operate be issued before any person "uses or operates any article, machine, equipment or other contrivance, the use of which may cause, reduce or control the emission of air contaminants."
Rule 2-1-307	Requires that a person not operate in violation of any permit condition in an Authority to Construct or Permit to Operate.

4. Has the District issued any Notice(s) of Violation (NOVs) to the Applicant concerning the subject of this variance request? Yes ☐ No ☐X **If "Yes", please attach copies of the NOVs**.

5. Has the equipment in question or any other equipment at this facility been under variance protection during the last year? Yes ☐ No ☐X

Docket #	Variance Period	Nature of Emission	Regulation/Rule/Section

6. List all NOV(s) issued to equipment at the **entire** facility during the previous 12 months: **NONE**

[You May Attach Additional Pages If Necessary]

Date of Notice	NOV #	Nature of Emission	Regulation/Rule/Section

Finding # 2: ***That, due to conditions beyond the reasonable control of the Applicant, 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.***

7. Describe, in detail, the event leading to the need for a variance:

Schnitzer filed an application to modify its Permit to Operate in July 2018, seeking approval to increase the number of allowable ship calls from 26 per year to 32 per year. The basis for this permit modification is set forth above in response to Question 2, namely, the need to utilize more vessels to move the same amount of finished product to market due to DWT limitations for ships calling at customer locations and the inability to fully load certain ships with reserved capacity for other facilities. No increase in production has occurred or is contemplated during the term of the variance.

Modification of Schnitzer's Permit to Operate is a discretionary decision that is subject to the requirements of the California Environmental Quality Act ("CEQA"). Because the District is the sole agency that regulates the number of ships that may call at Schnitzer's facility, the District concluded that it is necessarily the lead agency for purposes of CEQA and is unable to act as a responsible agency, whereby it could rely on CEQA documentation prepared by another agency. As a consequence, the District concluded that it may not approve Schnitzer's application to modify its Permit to Operate until the District has satisfied the requirements of CEQA by determining that the project is categorically exempt or by preparing a Negative Declaration, a Mitigated Negative Declaration, or an Environmental Impact Report. Schnitzer has been advised by District permit staff that the project does not qualify for any categorical exemption, thus requiring a more detailed environmental assessment of the project to determine whether it may cause a significant effect on the environment and, if so, how those impacts can be mitigated.

Although Schnitzer applied for a permit modification in a timely manner, and promptly supplied District permit staff with all information necessary to complete the CEQA analysis and process the application, the application has been pending for more than four years due to the District's inability to complete the CEQA process which began in 2019. This failure by the District is especially concerning given that the District conducted a CEQA analysis in 2009 when the annual ship limit was first included in Schnitzer's Permit to Operate. It is unclear to Schnitzer why the 2009 CEQA analysis cannot be updated for purposes of the pending application. Schnitzer has also paid the District a total of $40,000 in CEQA fees.

A chronology of events is set forth below, demonstrating Schnitzer's diligence in seeking a permit modification.

2018	
July 17, 2018	Application for Authority to Construct/Permit to Operate submitted to District, requesting increase in allowable ship calls from 26 to 32 per year.
August 18, 2018	District issued incompleteness determination and requested additional information.
August 30, 2018	Schnitzer responded to incompleteness determination, providing the requested information.
2019	
January 23, 2019	District requested that Schnitzer update the emission calculation spreadsheet for ocean-going vessels (OGVs) for reasons unrelated to the July 2018 permit application.
January 25, 2019	At District's request, Schnitzer re-submitted the information contained in its August 18, 2018 information submittal.
January 31, 2019	Schnitzer submitted revised OGV calculation procedures, per discussions with District permit engineer. With the submittal of this information, Schnitzer understood its application to be complete based on Rule 2-1-432, and no further information requests relating to the permit application have been received since this date.
February 8, 2019	District advised Schnitzer that it was exploring whether any other agencies were involved in the project that might serve as lead agency under CEQA, and asked Schnitzer to submit a prior CEQA analysis of ship emissions that had been prepared by the District in 2009.
February 8, 2019	Schnitzer provided District with District prior CEQA analysis that evaluated ship calls.
February 21, 2019	District conducted a site visit/meeting with Schnitzer to discuss the ship call increase permit application (among other matters).
October 28, 2019	District advised Schnitzer that it was issuing an RFP to hire a consultant to prepare the CEQA analysis for the July 2018 ship call increase permit application.
2020	
January 24, 2020	District advised Schnitzer that it had selected a consultant to prepare the necessary CEQA documents, subject to Governing Board approval.
April 28, 2020	District requested information regarding ship calls in 2019 to support its CEQA analysis for the ship call increase permit application.
May 18, 2020	District sent Schnitzer an invoice for fees related to the CEQA analysis for the ship call increase permit application. Schnitzer paid these fees on June 16, 2020.
July 8, 2020	District provided Schnitzer with the administrative draft project description for the CEQA analysis for the ship call increase permit application. This draft project description included the following: "This application will not change any throughput limits at the facility. The available space on ships for

	Schnitzer's products has been less than previously anticipated. The ocean-going vessels are not owned by Schnitzer, but by shipping vendors."
August 25, 2020	District requested additional information from Schnitzer to support the CEQA analysis for the ship call increase permit application.
September 2, 2020	Schnitzer responded to the August 25 information request.
September 29, 2020	District requested additional information from Schnitzer to support the CEQA analysis for the ship call increase permit application.
November 9, 2020	Schnitzer responded to the September 29 information request.
November 19, 2020	District requested additional information from Schnitzer to support the CEQA analysis for the ship call increase permit application.
2021	
January 8, 2021	Schnitzer responded to the November 19 information request.
January 11, 2021	District staff advised Schnitzer via email that the ship call increase application (A29411) was "in the final process of review/signatures. I expect it will be issued soon."
August 31, 2021	During a telephone call with Schnitzer representatives, District staff indicated they hoped that they would be able to get the ship call increase permit amendment out by the end of this year. However, staff advised that the cumulative impacts analysis for the CEQA document was still not complete and that the final CEQA document still had to go through the public review process.
November 3, 2021	District staff advised Schnitzer of proposed changes to the emission calculations for ship calls.
November 8, 2021	District and Schnitzer reached agreement on revised emission calculations for ship calls.
2022	
	No action taken on permit application

Further, Schnitzer has recently been advised that District permitting staff is backlogged and that the District does not currently have sufficient in-house CEQA capability to complete the CEQA analysis this year.

If Schnitzer is not allowed any additional ship calls in 2022, it will most likely be forced to suspend operations to avoid over-accumulation of product inventory, as the facility lacks the physical space to store production for the remainder of the year. As discussed below in response to Question 9, Schnitzer may be able to truck some product to other port facilities for export, but the logistics associated with this scenario are extremely complicated and the truck emissions would significantly exceed the emissions associated with 6 additional ship calls at the Oakland facility. Shipment through other berths in the Port of Oakland is not an

option as they lack the infrastructure and stevedoring services required for bulk loading of scrap metal.

Failure to obtain additional ship calls could result in rotating lay-offs of up to half the facility's workforce, adversely affecting 66 or more employees. At a minimum, suspension of operations would entail furloughing 17 full-time employees (FTE), with additional furloughs likely depending on how Schnitzer was able to adjust its operations to respond to the exigencies of the situation. Suspension of operations would also expose Schnitzer to significant contractual damages for non-delivery and adversely impact entities from whom Schnitzer purchases scrap metal, as well as the entities that utilize recycled metal from Schnitzer as raw material in their own operations.

Given the very modest number of additional ship calls that are requested, especially when viewed in light of the total number of ships that are operating in San Francisco Bay on a daily basis, requiring adherence to the current permit limit of 26 ships would result in an arbitrary or unreasonable taking of property, or the practical closing and elimination of a lawful business.

8. Has the Applicant received any complaints from the public regarding the operation of the subject equipment or activity within the last year?
Yes ☐ No ☐X

Date of Complaint	Number of Complaints	Nature of Complaint

9. Explain why it is beyond Applicant's reasonable control to comply with the Regulation(s) and/or Permit Condition(s):

As discussed above, the need for additional ships is attributable to two factors, both of which are beyond Schnitzer's reasonable control: (1) a reduction in the size of ships (DWT) that are available for dispatch to the Schnitzer facility due to draft limitations at the destination facilities, and (2) the inability to fully load vessels with product produced at Oakland in cases where a portion of the ship's capacity is contractually reserved for other facilities. Although Schnitzer timely submitted an application to modify its permit in July 2018 as a means of remaining in compliance, the District has been unable to complete the CEQA process, thereby unfairly and severely compromising Schnitzer's ability to conduct lawful operations. The District's very lengthy delays in the permitting process are likewise beyond Schnitzer's reasonable control.

Given the severity of the situation, Schnitzer has explored whether it could comply with its current limit on ship calls by trucking its finished ferrous products to another northern

California port for export. Schnitzer estimates that it would require 12,000 truck trips to deliver the production to another port facility that could accommodate the six additional ships, assuming an alternate facility (or facilities) could be identified that could lawfully receive the additional vessels. Schnitzer's Permit to Operate also contains an annual limit on the number of trucks that may visit the facility, which limit is sufficient to accommodate the additional 12,000 trucks that would be needed in 2022 to move the material to another port. The emissions associated with 12,000 truck trips substantially exceed the excess emissions that would be associated with six (6) additional ship calls at the Oakland facility, and the ship emissions would still occur as the vessels would need to enter the Bay and travel to the more distant port (e.g., Port of Stockton or West Sacramento) to be loaded. While this scenario would pose severe logistical difficulties, Schnitzer could lawfully proceed in this manner if senior management directed this course of action be taken to ameliorate the severe economic harm that would otherwise result from a shutdown of operations.

10. When and how did Applicant first become aware that it was not in compliance with the Rule(s) and/or permit condition(s)?

As noted above, Schnitzer first determined in 2018 that it would be advisable to apply for a permit modification to increase the allowable number of ship calls, so as to prevent any possible noncompliance with its permit. In recognition of the fact that the need for CEQA compliance would preclude issuance of the modified permit before the end of the year, the District agreed, in the reasonable exercise of its enforcement discretion, to enter into a Compliance and Settlement Agreement with Schnitzer in November 2018, subject to Schnitzer's payment of excess emission fees and a civil penalty for each ship over the allowed limit. Subsequent Compliance and Settlement Agreements were issued for Calendar Years 2020 and 2021, as the District remained unable to complete the CEQA process. Copies of the Compliance and Settlement Agreements are attached as Exhibits C, D and E. Pursuant to these agreements, Schnitzer has paid the District a total of $131,595.44 for the extra ship calls ($52,750 in penalties and $78,845.44 in excess emission fees). Schnitzer has never exceeded its permit limit except in accordance with the terms and conditions of the Compliance and Settlement Agreements. The District unexpectedly declined to renew the Compliance and Settlement Agreement for Calendar Year 2022, necessitating this application for variance relief.

11. What actions has Applicant taken since that time to achieve compliance with the Regulation(s) or permit condition(s)?

Schnitzer has responded promptly to all District information requests associated with the CEQA process. There is nothing that Schnitzer can do to change its customers' specifications on ship size or to prevent shipowners from contracting with other facilities for partial loads. An increase in the allowable number of ship calls is the only feasible compliance strategy, and one over which Schnitzer has no control.

12. What would be the harm to Applicant's business if the variance were not granted?

Economic losses: Est. $80 million (based on average of last 5 sales)

Number of Employees laid off (if any): 17-66, depending on the circumstances

Provide detailed information regarding economic losses, if any, (anticipated business closure, breach of contracts, hardship on customers, layoffs and/or similar impacts).

Failure to grant the requested relief will cause Schnitzer to breach contractual obligations to customers due to non-delivery of product and result in severe economic hardship and other losses to Schnitzer including contractual damages and financial penalties for ship cancellations. Production levels at customer locations would also be adversely affected due to lack of raw material needed for manufacturing steel and smelting of other metals. Businesses, government entities and consumers that rely on Schnitzer to purchase their scrap metal would also be adversely affected and forced to find alternate outlets for their scrap (by law, recyclable scrap metal cannot be disposed of in California landfills; see Public Resources Code § 42170). If Schnitzer were forced to suspend operations due to the inability to make any further shipments in Calendar Year 2022, economic losses to Schnitzer are estimated to exceed $78.8 million. While Schnitzer would seek to avoid having to lay off any employees, it would likely be forced by economic realities to take that draconian step.

Finding # 3: ***That the closing or taking would be without a corresponding benefit in reducing air contaminants.***

13. List the estimated or measured excess emissions or excess opacity, if any, on a daily basis, or over a more appropriate period of time (For example: duration of requested variance period, hourly basis). Also list emissions reductions proposed by Applicant as mitigation. If no excess emissions or opacity are expected during the variance period, go to No. 16.

Pollutant	(A)	(B)	(C)**
	Estimated Excess Emissions (lbs/day)	Reduction Due to Mitigation (lbs/day)	Net Emissions After Mitigation (lbs/day)
Carbon Monoxide	151 lbs/ship	0	151 lbs/ship
Oxides of Nitrogen	1312 lbs/ship	0	1312 lbs/ship
Sulfur Dioxide	25 lbs/ship	0	25 lbs/ship

Precursor Organic Compounds	62 lbs/ship	0	62 lbs/ship
Diesel Particulate Matter / PM10 / PM2.5	30 lbs/ship	0	30 lbs/ship

**Column A minus Column B = Column C

NOTE: The totals in Column C include the emissions from the ships when traveling from the coastal waters boundary to the Schnitzer dock, the tug-assist emissions, emissions while the ship is at berth, and the emissions from the ship when returning to the boundary of the coastal waters.

14. Show the calculations used to determine the excess emissions listed in No. 13. Are the values in No. 13 based on measurements _____ or estimates __X___?

Calculations of excess emissions per ship call are based on a detailed methodology approved by BAAQMD staff for use in the Compliance and Settlement Agreements for increased ship calls. The methodology is based on the calculations used in the 2009 CEQA analysis that are identified as the basis for the permit limit of 26 ships per year. The calculations used to determine the excess emissions associated with additional ship calls are set forth in Exhibit F, which addresses several ship-related issues. Please see the "CA Calculations" tab (for "Compliance Agreement Calculations").

15. Do the additional emissions during the variance period contain any Toxic Air Contaminants (TACs) [pursuant to Health and Safety Code Section 39655] or odorous substances? Yes X No ☐

If Yes, list the TACs or odorous substances and approximate amounts:

Diesel Particulate Matter: 30 lbs/ship; maximum of 180 lbs.

16. List measured or estimated annual emissions from entire facility for each pollutant which is the subject of this variance application:

Pollutant	Total Emissions from Entire Facility (tons/year)
Carbon Monoxide	5.49 tons/year
Oxides of Nitrogen	3.27 tons/year
Sulfur Dioxide	0.07 tons/year
Precursor Organic Compounds	17.55 tons/year

PM10/PM2.5	8.63 / 8.62 tons/year

Briefly explain the basis for these facility emission values:

These emission values are contained in the BAAQMD staff engineering analysis for the most recent permit application for the Oakland facility. These totals do not include ship emissions, which are not a part of the stationary source/facility except while at berth. Ship calls are reflected in the permit solely to enforce an assumption used in the 2009 CEQA analysis prepared by the District, namely that facility emissions are below the District's significance threshold for risk to human health. Based on information and belief and as supported by the District's prior issuance of Compliance and Settlement Agreements in 2018, 2020 and 2021, the Oakland facility's emissions remain below the District's significant risk threshold when the emissions associated with 6 additional ship calls are taken into account.

Finding # 4: ***That the Applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.***

17. Explain why the Applicant cannot curtail or terminate operations in lieu of obtaining a variance:

Reducing throughput at the facility is not an option, as the reduced volume of material processed would still need to be shipped offsite. The only options are (1) suspension of operations at the facility until the modified permit allowing additional ship calls is issued or until January 1, 2023, whichever occurs first, or (2) shipment of shred, Heavy Melt Steel and Bonus offsite by truck to another port (e.g., Stockton or West Sacramento). An estimated 2,000 truck trips would be required to replace each ship call, with NOx emissions of over 2,200 lbs from the trucks as compared with 1,312 lbs from the ship (and tugs). Similarly, DPM emissions from the trucks would be 98 lbs or more, as compared with 30 lbs from the ship (and tugs).

Finding # 5: ***During the period that the variance is in effect, the Applicant will reduce excess emissions to the maximum extent feasible.***

18. Explain how Applicant plans to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible (mitigation may include reductions at other sources):

Continued use of ships to carry the product is the only feasible mitigation measure short of suspending operations at the facility. Suspension of operations would require local companies who need outlets for their scrap metal to transport their material by truck to more distant locations (potentially out of state). The only other metal shredding facility in northern California is much smaller than the Schnitzer facility and is not capable of processing the additional volume of material processed in Oakland.

Finding # 6: ***During the period the variance is in effect, the Applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the District, and report these emissions levels to the District pursuant to a schedule established by the District.***

19. Has the District requested that the Applicant monitor or otherwise quantify emissions during the variance period? Yes ☐ X No ☐

If Yes, please describe how Applicant will do so:

The District requires Schnitzer to keep records of all ship calls in a District-approved log; Schnitzer maintains that log, and will continue to do so during the variance period. This information will be used to calculate emissions associated with additional ship calls based on a District-approved methodology.

APPLICANT'S PLAN FOR ACHIEVING COMPLIANCE:

20. How does the Applicant 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:

Detailed Description:

Schnitzer will timely respond to all requests for information from the District to support completion of the CEQA process for the pending permit application.

Schedule Of Increments Of Progress: Not Applicable

Increment Description	Completion Date

Applicant may propose operating conditions for the variance period which may be considered by the Hearing Board in its evaluation of the variance application.

PROPOSED OPERATING CONDITIONS:

Schnitzer maintains a log of all ship calls and will continue to do so during the variance period. This information will be used to calculate emissions associated with additional ship calls based on a District-approved methodology.

Variance Period Requested: From: Oct. 7, 2022 To: Dec. 31, 2022

Total Number of (Calendar) Days in Variance Period: 86

(Note: Variance relief will not be granted for any period preceding the date of filing of the Application for Variance.)

Date of Application: October 7, 2022

Completed By: Margaret Rosegay
(Print Name)

Title: Partner, Pillsbury Winthrop Shaw Pittman LLP, Counsel for Applicant

The following verification must be signed by the owner, manager, director or other responsible party of the plant, business, factory, or agency requesting the Variance.

VERIFICATION

I, the undersigned, hereby declare under the penalty of perjury, under the laws of the State of California, that I have read the foregoing document, including attachments and the items therein set forth, and that I know its contents, are true.

Dated at Edmonds, WA, on Oct. 7, 2022

Signature 

Print Name Scott B. Sloan

[You May Attach Additional Pages If Necessary]

Title Vice President – Corporate Environmental

Exhibit A

Authority to Construct, Application No. 30009

March 8, 2022

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

March 2, 2022

Schnitzer Steel Products Company
P O Box 747
Oakland, CA 94604

Attention: Pamela Gray

Application Number: 30009
Plant Number: 208
Equipment Location:
Adeline St, Foot of
Oakland, CA 94607

Dear Applicant:

SUBJECT: CHANGE OF PERMIT CONDITIONS

This letter is to advise you that your application for changes in permit conditions for the following equipment has been approved:

S-6 Shredder w/water injection, electric, 225 tph avg, 350 tph max

Abated by

A-6 Water Spray System

A-11 Venturi Scrubber
A-15 Regenerative Thermal Oxidizer
A-17 Packed Bed Scrubber

A-12 Venturi Scrubber
A-16 Regenerative Thermal Oxidizer
A-18 Packed Bed Scrubber

The equipment described above is subject to condition nos. 27348 and 27410.

Please include your permit number with any correspondence with the District. If you have any questions on this matter please call Davis Zhu, Senior Air Quality Engineer at (415) 749-4743.

Very truly yours,

Pamela J. Leong
Director of Engineering

by _____
Air Quality Engineering Manager

CSA:DZ
Attachment: Permit Condition nos. 27348, 27410

A-11 Venturi Scrubber, A-12 Venturi Scrubber, A-15 Regenerative Thermal Oxidizer, A-16 Regenerative Thermal Oxidizer, A-17 Packed Bed Scrubber, and A-18 Packed Bed Scrubber abating S-6 Shredder and S-7 In-feed Conveyor.

1. The owner/operator shall abate emissions from A-11 and A 12 Venturi Scrubbers with A-15 and A-16 Regenerative Thermal Oxidizers during all periods of operation. Combined flow rate shall not exceed 180,000 acfm. (basis: Cumulative Increase, BACT/TBACT)

2. The owner/operator shall operate A-15 and A-16 each to meet the following VOC destruction efficiency requirements:
   a. Outlet VOC concentration of 20 ppmv or less; or
   b. All of the following standards depending on the applicable inlet VOC concentration:
   c. VOC destruction efficiency > 98.5% if inlet VOC concentration > 2,000 ppmv;
   d. VOC destruction efficiency > 98% if inlet VOC concentration > 200 to < 2,000 ppmv;
   e. VOC destruction efficiency > 90% if inlet VOC concentration < 200 ppmv.

   (basis: Cumulative Increase; BACT/TBACT)

3. The owner/operator shall operate A-15 and A-16 at a minimum combustion zone temperature of 1600 degrees F, at all times when the shredder S-6 is operating. The District may adjust this minimum temperature, if source test data demonstrates that an alternate temperature is necessary for or capable of maintaining compliance with Part 2 above. (basis: Cumulative Increase; BACT/TBACT)

4. To determine compliance with the temperature requirement in these permit conditions, the owner/operator shall equip A-15 and A-16 each with a temperature measuring device capable of continuously measuring and recording the temperature in each regenerative thermal oxidizer. The owner/operator shall install, and maintain in accordance with manufacturer's recommendations, a temperature measuring device that meets the following criteria: the minimum and maximum measurable temperatures with the device are 560 degrees F and 1750 degrees F, respectively, and the minimum accuracy of the device over this temperature range shall be 1.0 percent of full-scale. (basis: Cumulative Increase; BACT/TBACT)

5. The owner/operator shall report any non-compliance with Part 3 of this condition to the Director of the Compliance & Enforcement Division at the time that it is discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well at the time of occurrence. (basis:

Cumulative Increase, Regulation 2-5)

6. The temperature limit in Part 3 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller setpoint complies with the temperature limit. An Allowable Temperature Excursion is one of the following:
   a. A temperature excursion not exceeding 20 degrees F; or
   b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
   c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.
      i. the excursion does not exceed 50 degrees F;
      ii. the duration of the excursion does not exceed 24 hours; and
      iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

   Two or more excursions greater than 15 minutes in duration occurring during the same 24 hour period shall be counted as one excursion toward the 12 excursion limit.
   (basis: Regulation 2-1-403)

7. For each Allowable Temperature Excursion that exceeds 20 degrees F and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five (or two years) years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:
   a. Temperature controller setpoint;
   b. Starting date and time, and duration of each Allowable Temperature Excursion;
   c. Measured temperature during each Allowable Temperature Excursion;
   d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
   e. All strip charts or other temperature records.

   (basis: Regulation 2-1-403)

8. The owner/operator shall not use more than 1,332,980 therms combined during any consecutive twelve-month period in A-15 and A-16 regenerative thermal oxidizers.
   (basis: Cumulative Increase)

9. The owner/operator shall abate emissions from A-15 and A-16 Regenerative Thermal Oxidizers with A-17 and A-18

Packed Bed Scrubbers during all periods of operation. Exhaust gas flow rate to each Packed Bed Scrubber shall not exceed 90,000 acfm, and liquid flow rate shall be at least 720 gallons per minute. (basis: Cumulative Increase, BACT/TBACT)

10. The owner/operator shall not emit more than following from A-15 and A-16 Regenerative Thermal Oxidizers at stacks P-17 and P-18:

	NOx (lb/MMscf)	CO (lb/MMscf)
A-15	50	84
A-16	50	84

(basis: Cumulative Increase, Source Test Method 13A and Method 6)

11. The owner/operator shall not emit more than the following toxic air contaminants from the exhaust of A-17 and A-18 Packed Bed Scrubbers, combined, unless the owner/operator complies with all of the procedures and limits in Parts 11a-d:
    a. Within 60 days of receiving source test results demonstrating that total emissions from stack P-17 and P-18 combined exceed any one of the limits in this part, the owner/operator shall submit a permit application to the Air District to request revisions in the TAC emission limits below. The permit application shall include all information required to conduct an updated health risk assessment for the Shredder, Thermal Oxidizers, and Acid Gas Scrubbers, including new proposed emission limits for fugitive emissions from the shredder building and for each stack for the full list of potential TACs for these devices, as identified in Part 13, that also demonstrate compliance with the source test results.
    b. The health risk assessment for this project shall demonstrate that total health risks resulting from the proposed limits on shredder building fugitive emissions, P-17 emissions, and P-18 emissions do not exceed the lower of (a) a cancer risk limit of 3.0 in a million for this project or (b) the applicable project cancer risk limit identified in Regulation 2, Rule 5. The health risk value shall be evaluated at the Maximally Exposed Individual Resident (MEIR) and Maximally Exposed Individual Worker (MEIW), but not the Point of Maximum Impact (PMI). In addition, the health risk assessment for this project shall demonstrate compliance with any other applicable limits or requirements of Regulation 2, Rule 5.
    c. The health risk assessment shall be conducted in accordance with the Regulation 2-5 procedures in effect at the time the HRA is conducted.
    d. If the health risk assessment for the revised TAC

emissions limits for the shredder and its associated abatement equipment find that health risks exceed any of the limits described in Part 11b, the owner/operator shall submit a compliance plan to reduced TAC emissions, change operational parameters, or make other improvements such that the health risk assessment meets the requirements of Part 11b. This compliance plan shall be submitted to the District within 60 days of notification by the District that such a plan is required.

Pollutant	Total Stack Emissions (P-17 + P-18) (lb/hr)
Arsenic	8.2E-6
Benzene	2.4E-2
Butadiene, 1,3-	6.1E-4
Cadmium	5.0E-4
Chromium, Hexavalent	7.8E-5
Ethyl Benzene	5.0E-2
Lead	3.2E-3
Nickel	1.5E-3
PCBs	3.4E-4
Toluene	2.0E-1

(basis: Regulation 2-5)

12. Not later than 60 days from the startup of A-15 and/or A-16 and annually thereafter, the owner/operator shall Conduct source tests to determine initial compliance with the limits in parts 2 and 10. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (basis: Cumulative Increase, Regulation 2-5)

13. Not later than 60 days from the startup of A-15 and/or A-16 and every five years thereafter, the owner/operator Shall conduct source tests to determine compliance with the limits in part 11. In addition to the compounds identified in Part 11, this source test shall include, as a minimum, the full list of potential TACs for the Shredder, Thermal Oxidizers, and Acid Gas Scrubbers identified below. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test.
(basis: Cumulative Increase, Regulation 2-5)

Potential TACs
Acetaldehyde
Arsenic
Benzene
Beryllium
Butadiene, 1,3-
Cadmium
Chromium, Hexavalent
Cobalt

Copper
Ethyl Benzene
Formaldehyde
Hexane
Isopropyl Alcohol
Lead
Manganese
Methanol
Methyl Chloroform
Methyl Ethyl Ketone
Methylene Chloride
Mercury
Naphthalene
Nickel
Polychlorinated Dibenzo-p-Dioxins (PCDDs), Polychlorinated Dibenzo Furans (PCDFs), and Dioxin-like PCBs*
Perchloroethylene
PCBs
Propylene
PAHs (as benzo(a)pyrene)
Selenium
Styrene
Toluene
Vanadium
Xylenes (mixed)
o-Xylene
Cumene
Hexachloroethane (PCA)
Methyl Isobutyl Ketone (MiBK)
Trimethylpentane, 2,2,4-
Acrylonitrile
1,1 Dichloroethene
Carbon Disulfide
1,4-Dioxane
1,4-Dichlorobenzene
Hydrogen Fluoride
Hydrogen Chloride

*This is a large group of compounds with different toxic equivalency factors (TEF) values as listed in Table 2-5-1.

14. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing.
(basis: Cumulative Increase, Regulation 2-5)

15. In order to demonstrate compliance with the above parts of this permit condition, the owner/operator shall maintain the following monthly records in a District approved log for at least 24 months from the date of

entry. Log entries shall be retained on site and made available to District staff upon request:

a. Monthly quantity of Natural Gas Consumed in A-15 and A-16 combined.
b. Monthly quantities shall be totaled for each consecutive twelve-month period.
c. All source test records required per Parts 12 and 13.

(basis: Cumulative Increase)

End of Conditions

Plant Name: Schnitzer Steel Products Company

Source No. 6 Shredder w/water injection, electric, 225 tph avg, 350 tph max

Condition No. 27410 Plant No. 208 Application No. 30009

This permit condition shall become effective upon the installation and start-up of the Regenerative Thermal Oxidizers (A-15 and A-16) and the Packed Bed Scrubbers (A-17 and A-18).

S-6 Shredder and S-7 Infeed Conveyor; abated by A-6 Water Sprays, A-11 Venturi Scrubber, A-12 Venturi Scrubber, A-15 Regenerative Thermal Oxidizer, A-16 Regenerative Thermal Oxidizer, A-17 Packed Bed Scrubber, and A-18 Packed Bed Scrubber. (Revision 1: A #14194, 6/16/06; Revision 2: A #16721, 4/9/09; Revision 3: A #27762, 11/10/16; Revision 4: A #27762, 11/20/2020; Revision 5: A #30009, 8/26/2021; Revision 6: A #30009, 3/2/2022)

1. The owner/operator shall not exceed the scrap-in throughput limit of 720,000 tons in any calendar year at this facility. (Basis: Regulations 2-1-301 - baseline 2005 production level of 431,471 tons/year - and 2-5-302 and Cumulative Increase for the incremental throughput)

2. The owner/operator shall enclose the shredder, S-6, and shall vent the captured shredder emissions to the Venturi Scrubbers, A-11 and A-12, followed by Regenerative Thermal Oxidizers, A-15 and A-16, followed by Packed Bed Scrubbers, A-17 and A-18, during all times that S-6 is operating. The owner/operator shall minimize fugitive emissions from the shredder enclosure during shredder operation by (a) designing the enclosure such that the total surface area of all openings in the enclosure does not exceed 5% of the total surface area of the enclosure walls, floor, and ceiling; (b) using curtain walls or strip curtains on the inlet feed conveyor opening; and (c) ensuring that the ventilation fan is operating within its design range. The owner/operator shall demonstrate that the ventilation fan is operating within its design range by maintaining the amperage greater than 480 amperes during shredder operation. The owner/operator shall operate each Venturi Scrubber in accordance with manufacture specifications. The owner/operator shall demonstrate this by maintaining a minimum water flow rate of 300 gallons per minute (gpm) to each venturi scrubber and an effective pressure differential operating range 15-22 inches of H2O across each venturi scrubber. (Basis: TBACT)

3. Total emissions from the S-6 Auto Shredder shall not exceed any of the emission limits listed below:

a. Maximum Permitted Emission Rates:

	P-17 and P-18 Pounds/Hour Per Stack	P-17 and P-18 Tons/Year Per Stack
PM10 (total filterable + condensable)	3.11	3.32
POC (calculated as methane)	2.74	2.55

b. Total particulate emissions from stacks P-17 and P-18 shall not exceed a grain loading of 0.0048 grains/dscf in each stack as determined in accordance with Regulation 6-1-602.1.

c. The owner/operator shall demonstrate compliance with the Part 3a stack emission limits as described in Part 4.

(Basis: Cumulative Increase, BACT, TBACT, and Regulations 2-5-302 and 8-2-301)

4. Source Testing Requirements for Part 3:

a. The owner/operator shall conduct quarterly monitoring for the total carbon concentration in stacks P-17 and P-18, using authorized procedures and methods, to demonstrate compliance with Part 3a and Regulation 8-2-301. This quarterly monitoring shall continue until an organic abatement system is operating and continued compliance with Regulation 8-2-301 has been demonstrated.

b. On an annual basis, unless noted otherwise, the owner/operator shall conduct a source test at stacks P-17 and P-18, while the S-6 Auto Shredder is operating at or near the maximum operating rate, to demonstrate compliance with the stack emission limits in Parts 3a-b and Regulation 8-2-301. The owner/operator shall record the shredder processing rate, the water application rates for the infeed conveyor and the shredder, the water flow rates and the pressure differential operating ranges at each venturi scrubber, and the ventilation fan amperage during the source test. The source test shall determine the hourly emission rate and the average emission factor (pounds of pollutant per ton of material processed by the shredder) for the following compounds:

- total carbon (calculated as methane and as defined in Regulation 8-2-202) shall be determined by Air District approved methods, such as EPA Methods 25A and 18.
- total POC (calculated as methane), where total POC

= total carbon (excluding methane only) - total NPOC. Total NPOC (calculated as methane) shall be determined by Air District approved methods, such as EPA Method 18 and EPA Method TO-15 or other similar GC/MS methods. Total NPOC is the sum of all NPOCs (other than methane) identified in Regulation 2-1-207, expressed as methane.

- total particulate emissions shall be determined using EPA Method 5/202. All measured total particulate emissions shall be assumed to be PM10 for comparison to the limits in Part 3a.
- full speciation of organic TACs shall be determined by Air District approved methods, such as EPA Method TO-15 or other similar GC/MS methods.
- PCBs shall be determined by Air District approved methods, such as CARB Method 428. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- PAHs and naphthalene shall be determined by Air District approved methods, such as CARB Method 429. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- Full set of metal TACs (including arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), cobalt (Co), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), and selenium (Se)), shall be determined using Air District approved procedures for each compound, including CARB Method 425 for hexavalent chromium. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- Dioxin and furans shall be determined by Air District approved methods, such as EPA Method 23/23A. Annual emissions for each stack shall be calculated based on the most recent 12-month shredder feedstock throughput rate and the pounds/ton emission factors determined by the most recent source test for total POC and total particulate emissions. Annual stack emission rates shall be compared to the Part 3a limits.
- The annual source test shall also determine the outlet grain loading and the concentration of total carbon in stacks P-17 and P-18 to demonstrate compliance with Part 3b and Regulation 8-2-301 using Air District approved methods.

c. The owner/operator shall submit a source test protocol and notification of the scheduled source test date to the Air District's Source Test Section Manager and to the Permit Engineer at least 30 days

prior to the scheduled test date.

d. The owner/operator shall notify the Source Test Section Manager of any changes to the scheduled test date as soon as possible.

e. The owner/operator shall submit a copy of the source test report to the Source Test Section Manager and the Permit Engineer within 60 days of the test date.

(Basis: Cumulative Increase, TBACT and Regulations 2-5-302 and 8-2-301)

5. The owner/operator shall apply water sprays (A-6) at the shredder, S-6, and infeed conveyor, S-7, at sufficient rates to ensure that non-metallic material exiting the sources is moist to the touch at all times of operation. (Basis: Cumulative Increase, TBACT; and Regulation 2-5-302)

6. The owner/operator shall operate the Recycling Center in such a manner that particulate emissions into the atmosphere from any operation/equipment for a period or periods aggregating more than three minutes in any hour shall not cause a visible emission which is as dark or darker than No. 0.5 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree or result in fallout on adjacent property in such quantities as to cause public nuisance per District Regulation 1-301.
(Basis: Regulations 1-301 and 6-1-301)

7. The owner/operator shall use water spray to minimize fugitive dust emissions from material/scrap handling and storage to comply with Part 6. The owner/operator shall operate the facility at all times in accordance with its approved Emissions Minimization Plan (EMP).
(Basis: Regulations 1-301, 6-1-301, and 6-4-301)

8. The owner/operator shall not exceed a total of 26 ship calls and 63,875 truck calls per calendar year to haul in/out scrap/materials at the facility. (Basis: health risk assessment for CEQA review)

9. In order to demonstrate compliance with Part 1 and 8, the owner/operator shall keep records of monthly and yearly throughput of shredder feedstock materials, ship calls and truck calls in a District approved log. Shredder feedstock shall be totaled for each consecutive rolling 12-month period. The log shall be maintained for a period of at least 5 years from the date of data entry and shall be made available to the District staff for inspection upon request. (Basis: Regulations 2-1-301 and 2-5-302, Cumulative Increase, CEQA)

End of Conditions

Plant Name: «Plant»

Source No. «Device1» «Desc1»

Condition No. «Cond2» Plant No. «Plant_no» Application No. «Appl_no»

Exhibit B

Permit to Operate No. A0208

Expires November 1, 2022

BAY AREA AIR QUALITY MANAGEMENT DISTRICT — PERMIT TO OPERATE

This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE
NOV 1, 2022

PLANT# 208

Pamela Gray, Regional Environmental Man
Schnitzer Steel Products Company
P O Box 747
Oakland, CA 94604

ORIGINAL SENT TO:

Schnitzer Steel Products Company
1101 Embarcadero-West
Oakland, CA 94607

Location: Adeline St, Foot of
Oakland, CA 94607

S#	DESCRIPTION	[Schedule]	PAID
6	MTGL/SEC> Crushing/shredding, Steel		565
	Shredder w/ water injection, electric, 225 tph (avg.)	[F]	
	Abated by: A6 Water Spray System		
	A11 Venturi Scrubber		
	A12 Venturi Scrubber		
	Emissions at: P15 Stack		
7	MTGL/SEC> Conveying, Steel		565
	Infeed Conveyor (electric)	[F]	
	Abated by: A6 Water Spray System		
	A11 Venturi Scrubber		
	A12 Venturi Scrubber		
	Emissions at: P15 Stack		
10	MINERL> Storage, contained, Cement		514
	Cement Silo	[F]	
	Abated by: A10 Baghouse, Pulse Jet		
	Emissions at: P10 Stack		
11	MTGL/SEC> Screening, Auto body components, 120 tons/hr max		0
	Joint Products Plants w/ enclosure (2 Trommels, 3 Screens, Classifiers, Conveyors, and ot	[exempt]	
	Abated by: A13 Water Spray System		
	A14 Baghouse, Pulse Jet		
	Emissions at: P14 Stack		

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE
NOV 1, 2022

PLANT# 208

S#	DESCRIPTION	[Schedule]	PAID
12	MTGL/SEC> Screening, Auto body components, 5 tons/hr max Drum Magnet Line W/ enclosure	[exempt]	0
13	MTGL/SEC> Screening, Solid waste - other/not spec JPP from Wet Seperation Unit downstream	[exempt]	0
16	Standby Diesel engine, 779 hp, EPA# HCPXL18.1HTH Emergency Standby Diesel Generator Set Abated by: A19 Diesel Oxidation Catalyst Emissions at: P16 Stack	[B,284 days]	202

4 Permitted Sources, 3 Exempt Sources

*** See attached Permit Conditions ***

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

Source#	Subject to Condition Numbers
6	27085, 27348, 27410
7	27085
10	24125
11	27085
12	27085
16	22850, 23787

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

COND# 22850 *applies to S# 16*

1. The owner/operator shall not exceed 50 hours per year per engine for reliability-related testing.
   [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited.
   [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.
   [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

a. Hours of operation for reliability-related activities (maintenance and testing).
b. Hours of operation for emission testing to show compliance with emission limits.
c. Hours of operation (emergency).
d. For each emergency, the nature of the emergency condition.
e. Fuel usage for each engine(s).
[Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

5. At School and Near-School Operation:
If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:

The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session.

"School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, athletic field, or other areas of school property but does not include unimproved school property.
[Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

COND# 23787 *applies to S# 16*

1. The owner/operator shall abate the particulate emissions from the emergency diesel engine by the Diesel Oxidation Catalyst at all times the engine is in operation. [Basis: Toxics]

COND# 24125 *applies to S# 10*

S-10, Cement Silo

1. The Permit Holder shall ensure the visible particulate emissions from the silo do not exceed Ringelmann Number 0.5 (or equivalent opacity) or result in fall out on adjacent property in such quantities as to cause annoyance to any other person. (basis: Regulation 6-1-301, 1-301)

2. The Permit Holder shall not exceed a throughput of 21,900 tons of cement in any consecutive 12-month period. (basis: cumulative increase)

3. The Permit Holder shall abate emissions from the silo by a filter, A-10, at all times the silo is in operation. The filter shall be functioning properly within the manufacturer's specified pressure drop range. (basis: cumulative increase)

4. In order to demonstrate compliance with part 2 of the condition, the Permit Holder shall keep daily, monthly, and consecutive 12-month records of the material throughput in a District approved logbook. The records shall be kept on site for at least 24 months from the date of data entry and be made available to the District staff for inspection. (basis: cumulative increase, recordkeeping)

COND# 27085 *applies to S#'s 6, 7, 11, 12, A12, A11*

Condition # 27085

S-6 Shredder and S-7 Infeed Conveyor; abated by A-6

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
PERMIT TO OPERATE

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

Water Sprays, A-11 Venturi Scrubber, and A-12 Venturi Scrubber (Revision 1: A #14194, 6/16/06; Revision 2: A #16721, 4/9/09; Revision 3: A #27762, 11/10/16; Revision 4: A #27762, 11/20/2020)

1. The owner/operator shall not exceed the scrap-in throughput limit of 720,000 tons in any calendar year at this facility. (Basis: Regulations 2-1-301 - baseline 2005 production level of 431,471 tons/year - and 2-5-302 and Cumulative Increase for the incremental throughput)

2. The owner/operator shall enclose the shredder, S-6, and shall vent the shredder emissions to the Venturi Scrubbers, A-11 and A-12, during all times that S-6 is operating. The owner/operator shall minimize fugitive emissions from the shredder enclosure during shredder operation by (a) designing the enclosure such that the total surface area of all openings in the enclosure does not exceed 5% of the total surface area of the enclosure walls, floor, and ceiling; (b) using curtain walls or strip curtains on the inlet feed conveyor opening; and c ensuring that the ventilation fan is operating within its design range. The owner/operator shall demonstrate that the ventilation fan is operating within its design range by maintaining the amperage greater than 480 amperes during shredder operation. The owner/operator shall operate each Venturi Scrubber in accordance with manufacture specifications. The owner/operator shall demonstrate this by maintaining a minimum water flow rate of 300 gallons per minute (gpm) to each venturi scrubber and an effective pressure differential operating range 15-22 inches of H2O across each venturi scrubber. (Basis: TBACT)

3. Total emissions from the S-6 Auto Shredder shall not exceed any of the emission limits listed below:
   a. Maximum Permitted Emission Rates:

	P-15 Stack Pounds/Hour	P-15 Stack Tons/Year
PM10 (total filterable + condensable)	5.91	6.15
POC (calculated as methane)	112.0	85.50

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

b. Total particulate emissions from the P-15 stack shall not exceed a grain loading of 0.0046 grains/dscf as determined in accordance with Regulation 6-1-602.1.

c. Organic emissions from the P-15 stack shall not exceed 300 ppmv (dry basis) of total carbon as determined in accordance with Regulation 8-2-601.

d. The owner/operator shall demonstrate compliance with the Part 3a stack emission limits as described in Part 4.

(Basis: Cumulative Increase, BACT, TBACT, and Regulations 2-5-302 and 8-2-301)

4. Source Testing Requirements for Part 3:

a. Within 180 days of issuance of this Permit to Operate, the owner/operator shall initiate quarterly monitoring for the total carbon concentration in stack P-15, using authorized procedures and methods, to demonstrate compliance with Parts 3a, 3c and Regulation 8-2-301, and to assess excess POC emissions in the event of non-compliance with Part 3a, 3c or Regulation 8-2-301. This quarterly monitoring shall continue until an organic abatement system is operating and continued compliance with Regulation 8-2-301 has been demonstrated.

b. Within 90 days of issuance of this Permit to Operate and annually thereafter, unless noted otherwise, the owner/operator shall conduct a District approved source test at stack P-15, while the S-6 Auto Shredder is operating at or near the maximum operating rate, to demonstrate compliance with the P-15 stack emission limits in Parts 3a-c. The owner/operator shall record the shredder processing rate, the water application rates for the infeed conveyor and the shredder, the water flow rates and the pressure differential operating ranges at each venturi scrubber, and the ventilation fan amperage during the source test. The source test shall determine the hourly emission rate and the average emission factor (pounds of pollutant per ton of material processed by the shredder) for the following compounds:
- total carbon (calculated as methane and as defined

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

in Regulation 8-2-202) shall be determined by Air District approved methods, such as EPA Methods 25A and 18,

- total POC (calculated as methane), where total POC = total carbon (excluding methane only) - total NPOC. Total NPOC (calculated as methane) shall be determined by Air District approved methods, such as EPA Method 18 and EPA Method TO-15 or other similar GC/MS methods. Total NPOC is the sum of all NPOCs (other than methane) identified in Regulation 2-1-207, expressed as methane.
- total particulate emissions shall be determined using EPA Method 5/202. All measured total particulate emissions shall be assumed to be PM10 for comparison to the limits in Part 3a.
- Full speciation of organic TACs shall be determined by Air District approved methods, such as EPA Method TO-15 or other similar GC/MS methods.
- PCBs shall be determined by Air District approved methods, such as CARB Method 428. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- PAHs and naphthalene shall be determined by Air District approved methods, such as CARB Method 429. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- Full set of metal TACs (including arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), and zinc (Zn)), shall be determined using Air District approved procedures for each compound, including CARB Method 425 for hexavalent chromium. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
- Annual emissions for Stack P-15 shall be calculated based on the most recent 12-month shredder feedstock throughput rate and the

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

pounds/ton emission factors determined by the most recent source test for total POC and total particulate emissions. Annual stack emission rates shall be compared to the Part 3a limits. The annual source test shall also determine the outlet grain loading and the concentration of total carbon in the P-15 stack to demonstrate compliance with Parts 3b and 3c using Air District approved methods.

c. The owner/operator shall submit a source test protocol and notification of the scheduled source test date to the Air District's Source Test Section Manager and to the Permit Engineer at least 30 days prior to the scheduled test date.

d. The owner/operator shall notify the Source Test Section Manager of any changes to the scheduled test date as soon as possible.

e. The owner/operator shall submit a copy of the source test report to the Source Test Section Manager and the Permit Engineer within 60 days of the test date.

(Basis: Cumulative Increase, TBACT and Regulations 2-5-302 and 8-2-301)

5. The owner/operator shall apply water sprays (A-6) at the shredder, S-6, and infeed conveyor, S-7, at sufficient rates to ensure that non-metallic material exiting the sources is moist to the touch at all times of operation. (Basis: Cumulative Increase, TBACT; and Regulation 2-5-302)

6. The owner/operator shall operate the Recycling Center in such a manner that particulate emissions into the atmosphere from any operation/equipment for a period or periods aggregating more than three minutes in any hour shall not cause a visible emission which is as dark or darker than No. 0.5 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree or result in fallout on adjacent property in such quantities as to cause public nuisance per District Regulation 1-301.
(Basis: Regulations 1-301 and 6-1-301)

7. The owner/operator shall use water spray to minimize fugitive dust emissions from material/scrap handling and

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

storage to comply with Part 6. The owner/operator shall operate the facility at all times in accordance with its approved Emissions Minimization Plan (EMP). (Basis: Regulations 1-301, 6-1-301, and 6-4-301)

8. The owner/operator shall not exceed a total of 26 ship calls and 63,875 truck calls per calendar year to haul in/out scrap/materials at the facility. (Basis: health risk assessment for CEQA review)

9. In order to demonstrate compliance with Part 1 and 8, the owner/operator shall keep records of monthly and yearly throughput of shredder feedstock materials, ship calls and truck calls in a District approved log. Shredder feedstock shall be totaled for each consecutive rolling 12-month period. The log shall be maintained for a period of at least 5 years from the date of data entry and shall be made available to the District staff for inspection upon request. (Basis: Regulations 2-1-301 and 2-5-302, Cumulative Increase, CEQA)

COND# 27348 *applies to S# 6*

A-11 Venturi Scrubber, A-12 Venturi Scrubber, A-15 Regenerative Thermal Oxidizer, A-16, Regenerative Thermal Oxidizer, A-17 Packed Bed Scrubber, and A-18 Packed Bed Scrubber abating S-6 Shredder and S-7 In-feed Conveyor.

1. The owner/operator shall abate emissions from A-11 and A 12 Venturi Scrubbers with A-15 and A-16 Regenerative Thermal Oxidizers during all periods of operation. Combined flow rate shall not exceed 180,000 acfm. (basis: Cumulative Increase, BACT/TBACT)
2. The owner/operator shall operate A-15 and A-16 each to meet the following VOC destruction efficiency requirements:
   a. Outlet VOC concentration of 10 ppmv or less; or
   b. All of the following standards depending on the applicable inlet VOC concentration:
   c. VOC destruction efficiency > 98.5% if inlet VOC concentration > 2,000 ppmv;
   d. VOC destruction efficiency > 97% if inlet VOC concentration > 200 to < 2,000 ppmv;

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

e. VOC destruction efficiency > 90% if inlet VOC concentration < 200 ppmv.

(basis: Cumulative Increase; BACT/TBACT)

3. The owner/operator shall operate A-15 and A-16 at a minimum combustion zone temperature of 1600 degrees F, at all times when the shredder S-6 is operating. The District may adjust this minimum temperature, if source test data demonstrates that an alternate temperature is necessary for or capable of maintaining compliance with Part 2 above. (basis: Cumulative Increase; BACT/TBACT)

4. To determine compliance with the temperature requirement in these permit conditions, the owner/operator shall equip A-15 and A-16 each with a temperature measuring device capable of continuously measuring and recording the temperature in each regenerative thermal oxidizer. The owner/operator shall install, and maintain in accordance with manufacturer's recommendations, a temperature measuring device that meets the following criteria: the minimum and maximum measurable temperatures with the device are 560 degrees F and 1750 degrees F, respectively, and the minimum accuracy of the device over this temperature range shall be 1.0 percent of full-scale. (basis: Cumulative Increase; BACT/TBACT)

5. The owner/operator shall report any non-compliance with Part 3 of this condition to the Director of the Compliance & Enforcement Division at the time that it is discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well at the time of occurrence. (basis: Cumulative Increase, Regulation 2-5)

6. The temperature limit in Part 3 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller setpoint complies with the temperature limit. An Allowable Temperature Excursion is one of the following:

   a. A temperature excursion not exceeding 20 degrees F; or

   b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or

   c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

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criteria are met.
i. the excursion does not exceed 50 degrees F;
ii. the duration of the excursion does not exceed 24 hours; and
iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

. Two or more excursions greater than 15 minutes in duration occurring during the same 24 hour period shall be counted as one excursion toward the 12 excursion limit. (basis: Regulation 2-1-403)

7. For each Allowable Temperature Excursion that exceeds 20 degrees F and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five (or two years) years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:
   a. Temperature controller setpoint;
   b. Starting date and time, and duration of each Allowable Temperature Excursion;
   c. Measured temperature during each Allowable Temperature Excursion;
   d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
   e. All strip charts or other temperature records.

(basis: Regulation 2-1-403)

8. The owner/operator shall not use more than 1,332,980 therms combined during any consecutive twelve-month period in A-15 and A-16 regenerative thermal oxidizers. The A-15 and A-16 regenerative thermal oxidizers should be in operating mode not exceeding 8 hours per day, with the remaining hours in standby mode. (basis: Cumulative Increase)

9. The owner/operator shall abate emissions from A-15 and A 16 Regenerative Thermal Oxidizers with A-17 and A-18 Packed Bed Scrubbers during all periods of operation. Exhaust gas flow rate to each Packed Bed Scrubber shall not exceed 90,000 acfm, and liquid flow rate shall be at least 720 gallons per minute. (basis: Cumulative Increase, BACT/TBACT)

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

10. The owner/operator shall not emit more than following from A-15 and A-16 Regenerative Thermal Oxidizers at stacks P-17 and P-18:

	NOx (lb/MMscf)	CO lb/MMscf)
A-15	50	84
A-16	50	84

.(basis: Cumulative Increase, Source Test Method 13A and Method 6)

11. The owner/operator shall not emit more than the following toxic air contaminants from the exhaust of A-17 and A-18 Packed Bed Scrubbers, combined, unless the owner/operator complies with all of the procedures and limits in Parts 11a-d:
    a. Within 60 days of receiving source test results demonstrating that total emissions from stack P-17 and P-18 combined exceed any one of the limits in this part, the owner/operator shall submit a permit application to the Air District to request revisions in the TAC emission limits below. The permit application shall include all information required to conduct an updated health risk assessment for the Shredder, Thermal Oxidizers, and Acid Gas Scrubbers, including new proposed emission limits for fugitive emissions from the shredder building and for each stack for the full list of potential TACs for these devices, as identified in Part 13, that also demonstrate compliance with the source test results.
    b. The health risk assessment for this project shall demonstrate that total health risks resulting from the proposed limits on shredder building fugitive emissions, P-17 emissions, and P-18 emissions do not exceed the lower of (a) a cancer risk limit of 3.0 in a million for this project or (b) the applicable project cancer risk limit identified in Regulation 2, Rule 5. The health risk value shall be evaluated at the Maximally Exposed Individual Resident (MEIR) and Maximally Exposed Individual Worker (MEIW), but not the Point of Maximum Impact (PMI). In addition, the health risk assessment for this project shall demonstrate compliance with any other applicable limits or requirements of Regulation 2, Rule 5.
    c. The health risk assessment shall be conducted in accordance with the Regulation 2-5 procedures in

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

effect at the time the HRA is conducted.

d. If the health risk assessment for the revised TAC emissions limits for the shredder and its associated abatement equipment find that health risks exceed any of the limits described in Part 11b, the owner/operator shall submit a compliance plan to reduced TAC emissions, change operational parameters, or make other improvements such that the health risk assessment meets the requirements of Part 11b. This compliance plan shall be submitted to the District within 60 days of notification by the District that such a plan is required. Pollutant _ Total Stack Emissions (P-17 + P-18)

lb/hr	
Arsenic	8.2E-6
Benzene	1.8E-2
Butadiene, 1,3-	4.5E-4
Cadmium	5.0E-4
Chromium, Hexavalent	7.8E-5
Ethyl Benzene	3.7E-2
Lead	3.2E-3
Nickel	1.5E-3
PCBs	2.6E-4
Toluene	1.5E-1

.(basis: Regulation 2-5)

12. Not later than 60 days from the startup of A-15 and/or A-16 and annually thereafter, the owner/operator shall conduct District approved source tests to determine initial compliance with the limits in parts 2 and 10. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (basis: Cumulative Increase, Regulation 2-5)

13. Not later than 60 days from the startup of A-15 and/or A-16 and every five years thereafter, the owner/operator shall conduct District approved source tests to determine compliance with the limits in part 11. In addition to the compounds identified in Part 11, this source test shall include, as a minimum, the full list of potential TACs for the Shredder, Thermal Oxidizers, and Acid Gas Scrubbers identified below. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (basis: Cumulative Increase,

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

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PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

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Regulation 2-5)
Potential TACs
Acetaldehyde
Arsenic
Benzene
Beryllium
Butadiene, 1,3-
Cadmium
Chromium, Hexavalent
Copper
Ethyl Benzene
Formaldehyde
Hexane
Isopropyl Alcohol
Lead
Manganese
Methanol
Methyl Chloroform
Methyl Ethyl Ketone
Methylene Chloride
Mercury
Naphthalene
Nickel
Polychlorinated Dibenzo-p-Dioxins (PCDDs), Polychlorinated Dibenzo Furans (PCDFs), and Dioxin-like PCBs*
Perchloroethylene
PCBs
Propylene
PAHs (as benzo(a)pyrene)
Selenium
Styrene
Toluene
Vanadium
Xylenes (mixed)
o-Xylene
Cumene
Hexachloroethane (PCA)
Methyl Isobutyl Ketone (MiBK)
Trimethylpentane, 2,2,4-
Acrylonitrile
1,1 Dichloroethene
Carbon Disulfide
1,4-Dioxane
1,4-Dichlorobenzene

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

Hydrogen Fluoride
Hydrogen Chloride

This is a large group of compounds with different toxic equivalency factors (TEF) values as listed in Table 2-5-1.

14. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (basis: Cumulative Increase, Regulation 2-5)
15. In order to demonstrate compliance with the above parts of this permit condition, the owner/operator shall maintain the following monthly records in a District approved log for at least 24 months from the date of entry. Log entries shall be retained on site and made available to District staff upon request:
    a. Monthly quantity of Natural Gas Consumed in A-15 and A-16 combined.
    b. Monthly quantities shall be totaled for each consecutive twelve month period.
    c. All source test records required per Parts 12 and 13. (basis: Cumulative Increase)

COND# 27410 *applies to S# 6*

This permit condition shall become effective upon the installation and start-up of the Regenerative Thermal Oxidizers (A-15 and A-16) and the Packed Bed Scrubbers (A-17 and A-18).

S-6 Shredder and S-7 Infeed Conveyor; abated by A-6 Water Sprays, A-11 Venturi Scrubber, A-12 Venturi Scrubber, A-15 Regenerative Thermal Oxidizer, A-16, Regenerative Thermal Oxidizer, A-17 Packed Bed Scrubber, and A-18 Packed Bed Scrubber. (Revision 1: A #14194, 6/16/06; Revision 2: A #16721, 4/9/09; Revision 3: A #27762, 11/10/16; Revision 4: A #27762, 11/20/2020, A #30009, enter issue date)

1. The owner/operator shall not exceed the scrap-in throughput limit of 720,000 tons in any calendar year at

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

this facility. (Basis: Regulations 2-1-301 - baseline 2005 production level of 431,471 tons/year - and 2-5-302 and Cumulative Increase for the incremental throughput)

2. The owner/operator shall enclose the shredder, S-6, and shall vent the captured shredder emissions to the Venturi Scrubbers, A-11 and A-12, followed by Regenerative Thermal Oxidizers, A-15 and A-16, followed by Packed Bed Scrubbers, A-17 and A-18, during all times that S-6 is operating. The owner/operator shall minimize fugitive emissions from the shredder enclosure during shredder operation by (a) designing the enclosure such that the total surface area of all openings in the enclosure does not exceed 5% of the total surface area of the enclosure walls, floor, and ceiling; (b) using curtain walls or strip curtains on the inlet feed conveyor opening; and c ensuring that the ventilation fan is operating within its design range. The owner/operator shall demonstrate that the ventilation fan is operating within its design range by maintaining the amperage greater than 480 amperes during shredder operation. The owner/operator shall operate each Venturi Scrubber in accordance with manufacture specifications. The owner/operator shall demonstrate this by maintaining a minimum water flow rate of 300 gallons per minute (gpm) to each venturi scrubber and an effective pressure differential operating range 15-22 inches of H2O across each venturi scrubber. (Basis: TBACT)

3. Total emissions from the S-6 Auto Shredder shall not exceed any of the emission limits listed below:
a. Maximum Permitted Emission Rates:

	P-17 and P-18 Pounds/Hour Per Stack	P-17 and P-18 Tons/Year Per Stack
PM10 (total filterable + condensable)	3.11	3.30
POC (calculated as methane)	3.11	1.95

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

b. Total particulate emissions from stacks P-17 and P-18 shall not exceed a grain loading of 0.0047 grains/dscf in each stack as determined in accordance with Regulation 6-1-602.1.

c. Organic emissions from stacks P-17 and P-18 shall not exceed 10 ppmv (dry basis) of total carbon in each stack as determined in accordance with Regulation 8-2-601.

d. The owner/operator shall demonstrate compliance with the Part 3a stack emission limits as described in Part 4.

(Basis: Cumulative Increase, BACT, TBACT, and Regulations 2-5-302 and 8-2-301)

4. Source Testing Requirements for Part 3:

a. The owner/operator shall conduct quarterly monitoring for the total carbon concentration in stacksP-17 and P-18, using authorized procedures and methods, to demonstrate compliance with Parts 3a, 3c and Regulation 8-2-301. This quarterly monitoring shall continue until an organic abatement system is operating and continued compliance with Regulation 8-2-301 has been demonstrated.

b. On an annual basis, unless noted otherwise, the owner/operator shall conduct a District approved source test at stacks P-17 and P-18, while the S-6 Auto Shredder is operating at or near the maximum operating rate, to demonstrate compliance with the stack emission limits in Parts 3a-c. The owner/operator shall record the shredder processing rate, the water application rates for the infeed conveyor and the shredder, the water flow rates and the pressure differential operating ranges at each venturi scrubber, and the ventilation fan amperage during the source test. The source test shall determine the hourly emission rate and the average emission factor (pounds of pollutant per ton of material processed by the shredder) for the following compounds:

-total carbon (calculated as methane and as defined in Regulation 8-2-202) shall be determined by Air District approved methods, such as EPA Methods 25A and 18,

-total POC (calculated as methane), where total POC =

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

==========

total carbon (excluding methane only) - total NPOC. Total NPOC (calculated as methane) shall be determined by Air District approved methods, such as EPA Method 18 and EPA Method TO-15 or other similar GC/MS methods. Total NPOC is the sum of all NPOCs (other than methane) identified in Regulation 2-1-207, expressed as methane.
-total particulate emissions shall be determined using EPA Method 5/202. All measured total particulate emissions shall be assumed to be PM10 for comparison to the limits in Part 3a.

-Full speciation of organic TACs shall be determined by Air District approved methods, such as EPA Method TO-15 or other similar GC/MS methods.
-PCBs shall be determined by Air District approved methods, such as CARB Method 428. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
-PAHs and naphthalene shall be determined by Air District approved methods, such as CARB Method 429. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
-Full set of metal TACs (including arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), and zinc (Zn)), shall be determined using Air District approved procedures for each compound, including CARB Method 425 for hexavalent chromium. (This test shall be conducted within 90 days of Permit to Operate issuance and once every four years thereafter.)
-Dioxin and furans shall be determined by Air District approved methods, such as EPA Method 23/23A.
-Annual emissions for each stack shall be calculated based on the most recent 12-month shredder feedstock throughput rate and the pounds/ton emission factors determined by the most recent source test for total POC and total particulate emissions. Annual stack emission rates shall be compared to the Part 3a limits.
The annual source test shall also determine the outlet grain loading and the concentration of total carbon in stacks P-17 and P-18 to demonstrate compliance with Parts 3b and 3c using Air District approved methods.

c. The owner/operator shall submit a source test protocol and notification of the scheduled source

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

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test date to the Air District's Source Test Section Manager and to the Permit Engineer at least 30 days prior to the scheduled test date.

d. The owner/operator shall notify the Source Test Section Manager of any changes to the scheduled test date as soon as possible.

e. The owner/operator shall submit a copy of the source test report to the Source Test Section Manager and the Permit Engineer within 60 days of the test date. (Basis: Cumulative Increase, TBACT and Regulations 2-5-302 and 8-2-301)

5. The owner/operator shall apply water sprays (A-6) at the shredder, S-6, and infeed conveyor, S-7, at sufficient rates to ensure that non-metallic material exiting the sources is moist to the touch at all times of operation. (Basis: Cumulative Increase, TBACT; and Regulation 2-5-302)

6. The owner/operator shall operate the Recycling Center in such a manner that particulate emissions into the atmosphere from any operation/equipment for a period or periods aggregating more than three minutes in any hour shall not cause a visible emission which is as dark or darker than No. 0.5 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree or result in fallout on adjacent property in such quantities as to cause public nuisance per District Regulation 1-301. (Basis: Regulations 1-301 and 6-1-301)

7. The owner/operator shall use water spray to minimize fugitive dust emissions from material/scrap handling and storage to comply with Part 6. The owner/operator shall operate the facility at all times in accordance with its approved Emissions Minimization Plan (EMP). (Basis: Regulations 1-301, 6-1-301, and 6-4-301)

8. The owner/operator shall not exceed a total of 26 ship calls and 63,875 truck calls per calendar year to haul in/out scrap/materials at the facility. (Basis: health risk assessment for CEQA review)

PERMIT EXPIRATION DATE
NOV 1, 2022

Plant# 208

*** PERMIT CONDITIONS ***

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9. In order to demonstrate compliance with Part 1 and 8, the owner/operator shall keep records of monthly and yearly throughput of shredder feedstock materials, ship calls and truck calls in a District approved log. Shredder feedstock shall be totaled for each consecutive rolling 12-month period. The log shall be maintained for a period of at least 5 years from the date of data entry and shall be made available to the District staff for inspection upon request. (Basis: Regulations 2-1-301 and 2-5-302, Cumulative Increase, CEQA)

~~~~~~~~~~~~~~~~~~~~~~~~~~~ END OF CONDITIONS ~~~~~~~~~~~~~~~~~~~~~~~~~~~
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S#	Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	CO
6	Shredder w/ water injection, electric, 225	20.8	880	-	-	-
7	Infeed Conveyor (electric)	11	46	-	-	-
10	Cement Silo	-	-	-	-	-
11	Joint Products Plants w/ enclosure (2 Trom	-	-	-	-	-
12	Drum Magnet Line W/ enclosure	.5	-	-	-	-
13	JPP from Wet Seperation Unit downstream	-	-	-	-	-
16	Emergency Standby Diesel Generator Set	-	-	-	-	-
	T O T A L S	32.3	926			

** PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT **

Pollutant Name	Emissions lbs/day
Benzene	3.59
Ethylene dichloride	.09
Hexane	11.19
Isopropyl alcohol	1.10
Methyl ethyl ketone (MEK)	2.40
Methyl alcohol	2.55
Perchloroethylene	.60
Styrene	1.29
Toluene	31.12
Xylene	40.98
Ethylbenzene	8.31
Acrylonitrile	.05
Vinylidene chloride	.12
Methylene chloride	2.57
1,3-butadiene	.11
Polychlorinated biphenyl (PCB)	.08
Propylene	3.11
1,1,1-Trichloroethane	.31
Copper (all) pollutant	.05
Lead (all) pollutant	.02
Manganese	.03
Nickel pollutant	.01

Exhibit C

Compliance and Settlement Agreement, Calendar Year 2018

November 20, 2018

COMPLIANCE AND SETTLEMENT AGREEMENT

THIS COMPLIANCE AND SETTLEMENT AGREEMENT (**"AGREEMENT"**) is entered into and becomes effective as of the Date of Execution by and between **SCHNITZER STEEL INDUSTRIES, INC.** ("**SCHNITZER**") and the **BAY AREA AIR QUALITY MANAGEMENT DISTRICT** ("**DISTRICT**"), hereinafter sometimes individually referred to as a "**Party**" and collectively as the "**Parties**."

RECITALS

1. The District is the regional agency with primary responsibility for the control of air pollution from stationary sources in the San Francisco Bay Area air basin. Pursuant to that responsibility, the District is authorized to regulate stationary sources, such as metal recycling facilities within the air basin, which authority includes the requirement that facilities obtain and maintain District permits to operate certain stationary sources. *See California Health & Safety Code Sections 40001, 40701, 40752, 42400-42421, and 42451-42454.*

2. Pursuant to that authority, the District has required and issued to Schnitzer a permit to operate the metal recycling facility that it owns and operates at 1101 Embarcadero West, Oakland, California 94607 (Permit to Operate No. A0208) ("Facility").

3. As described by Schnitzer, a significant percentage of the processed scrap metal produced by the Facility, including primarily ferrous "shred" and Heavy Melt Steel, is loaded onto ocean-going vessels and sold to customers around the world. As an essential part of its operations, Schnitzer owns and operates a dock on the Oakland Inner Harbor, located immediately adjacent to the upland portion of the Facility, where the ships are berthed during loading operations. Metal products are conveyed to the dock either by covered conveyor or by truck (via a concrete pier). Given the nature of the products produced by the Facility, and the location of customer facilities (e.g., foreign steel mills and smelters) that use these recycled metals as raw materials in the production of steel and other metals, Schnitzer represents there is no other feasible way to transport these products to foreign, overseas markets.

4. District Permit to Operate No. A0208, Condition No. 23114 (6), authorizes a total of 26 ships to call at Schnitzer's Facility on an annual basis. This condition was included in an Authority to Construct issued to the Facility in June 2008 and has remained in the Facility's Permit to Operate since that time.

5. According to Schnitzer, over the past several years, the capacity of the ships that are dispatched to the Facility has changed, affecting the total number of ships that are needed to move the Facility's finished products to market. In general, the average rated deadweight tonnage (DWT) of ships calling at Schnitzer's dock has decreased, meaning that more ships are needed to move the same amount of material. In some cases, this is due to restrictions at destination ports that cannot accommodate the draft required for larger, or more heavily loaded, vessels. In other cases, the vessels are

scheduled to pick up material from other facilities and thus cannot be fully loaded at the Oakland Facility. In calendar years 2015, 2016, and 2017, there were 20, 19 and 25 ship calls, respectively. Prior to 2018, Schnitzer had been able to comply with its permit limit through very close coordination of production and shipping schedules, but it anticipated that it would be unable to comply with the permit limit in 2018. A review of Schnitzer's 2016 and 2017 monthly ship call records indicated that Schnitzer could exceed the permitted number of ship calls for 2018 in or before August 2018.

6. On July 17, 2018, Schnitzer submitted an application to the District requesting an increase in the number of ships allowed to call at the Facility, from 26 ships per calendar year to 32 ships per calendar year. While Schnitzer does not propose to increase shredder throughput, as currently limited by its Permit to Operate in its application or to install any new emission sources, the proposed increased number of ship calls will result in increased emissions of air contaminants.

7. As of the Effective Date, the application is incomplete. Further, the District, which is the lead agency, cannot complete its environmental review of the proposed project until the application is complete. Schnitzer Steel does not expect to exceed the number of ship calls (26) currently allowed by the Permit to Operate until November 2018 at the earliest. Based on current production rates and customer commitments, Schnitzer expects to require a total of up to 30 ships by the end of the year, or four (4) more than currently allowed.

8. Prior to Schnitzer's completion of its application and the District's completion of its environmental review and decision on the application, the Parties anticipate that Schnitzer may exceed its permitted number of ship calls for calendar year 2018, which would be a violation of Schnitzer's Permit to Operate.

9. Schnitzer seeks a compliance and settlement agreement with the District that enables Schnitzer to increase the number of allowable ship calls from 26 to 30 for calendar year 2018. These additional ship calls will enable Schnitzer to continue its scrap metal recycling operations without need to curtail production or to stockpile large quantities of material on site. The additional ship calls will result increased emissions of oxides of nitrogen (NOx), precursor organic compounds (POCs), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter in the form of diesel exhaust particulate matter (PM).

10. Schnitzer maintains that it would suffer severe economic hardship were it forced to cease production or otherwise curtail operations so as not to exceed the current permitted number of ship calls and that Schnitzer has no other feasible means of transporting its finished products to foreign, overseas markets.

11. Schnitzer also states that if it were forced to shut down or otherwise significantly curtail its operations to maintain compliance with the current ship call limit, there is insufficient shredding capacity in the state to process the end-of-life automobiles, appliances and other light iron metal products that are regularly processed by Schnitzer. As a consequence, the large volumes of cars, appliances and miscellaneous scrap

materials processed by Schnitzer would accumulate in other locations, placing undue burdens on feeder yards. Large stockpiles of unprocessed metal, whether at Schnitzer's facility or at other locations, can pose a fire danger that increases as the piles become larger. Routine processing of these materials avoids disruption within the industry, maintains stockpiles within their normal size ranges and minimizes the risk of fires.

12. In support of its request for this Agreement, Schnitzer asserts that it has an excellent record of compliance with District rules and regulations and with the requirements of its Permit to Operate, and in particular, has never exceeded the allowable number of ship calls at the Facility.

13. Schnitzer asserts that:

(a) Schnitzer would suffer severe economic hardship if it were forced to cease or curtail operations in order to comply with the current annual limit on the number of ships that may call at the Facility; and

(b) Temporary shutdown or curtailment of operations for the balance of 2018 would contribute to the accumulation of very large quantities of processed or unprocessed scrap metal, creating operational disruption and increasing the risk of fire at the Facility or at alternate storage locations.

14. In seeking a compliance and settlement agreement to address its permit non-compliance pending issuance of an amended Permit to Operate:

(a) Schnitzer agrees that it shall pay excess emission fees pursuant to District Regulation 3, Schedule I, Attachment A, Table I for excess emissions associated with the increased number of ship calls, and

(b) Schnitzer agrees it will pay a stipulated civil penalty for exceeding the permitted number of ships, contrary to the terms and conditions of the Permit to Operate.

15. Based on the foregoing, the District agrees to enter into a compliance and settlement agreement that commences as of the Effective Date of this Agreement and ends January 31, 2019.

NOW, THEREFORE, based on the foregoing recitals, and in consideration of the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Schnitzer agrees to, and shall, comply with all terms of this Agreement.

2. **Compliance Period**. As of the Effective Date, until no later than December 31, 2018, Schnitzer shall be entitled to load up to four (4) additional ships at the Facility, for

a total of 30 ships during calendar year 2018. However, the Agreement shall remain in effect until January 31, 2019, or until such earlier date as Schnitzer has paid the required excess emission fees and the monetary penalties specified in Paragraph 3 below and such payments are verified as deposited and cleared by the District.

3. **Excess Emission Fees and Civil Penalties**.

a. **Excess Emission Fee**. Schnitzer shall pay to the District an excess emission fee that is attributable to the additional emissions of NOx, POC, CO, SO_2, and PM in the form of diesel exhaust particulate matter, for each of the up to four additional ship calls. The payment shall be based on the rates per pound for the respective air contaminant prescribed in District Regulation 3, Schedule A, Attachment I, Table I. Schnitzer shall deliver the remittance to the District no later than January 15, 2019, accompanied by documentation explaining how the fee was calculated.

b. **Civil Monetary Penalties**. No later than January 15, 2019, Schnitzer shall remit to the District a civil monetary penalty in the amount of $12,500 for each ship that calls at the Facility in excess of the number of ships currently allowed under Permit to Operate No. A0208.

c. Schnitzer shall pay all monies by corporate check made payable to the "Bay Area Air Quality Management District." Schnitzer shall deliver the payments by hand or certified mail to the District, to the attention of Brian C. Bunger, District Counsel, at the address for notices to the District set forth in Paragraph 6 below.

4. **Effect of Agreement**. These payments will be in full and final settlement of any and all other claims that have been or could have been asserted by the District arising out of or relating to Schnitzer's violation of the annual limit on ship calls contained in its Permit to Operate.

5. **Compliance with District Regulations during the Compliance Period**.

a. Throughout the Compliance Period, Schnitzer shall remain in compliance with all applicable District Regulations and its Permit to Operate, except Permit Condition No. 23114 (6), as it pertains to ship calls. Any violation of District Regulations or of the Permit to Operate, exclusive of Permit Condition No. 23114 (6) as it pertains to ship calls, is a separate violation, subjecting Schnitzer to separate notices of violation and civil penalties.

b. The District reserves the right to take future enforcement actions arising out of violations not covered by this Agreement. Except as otherwise provided herein, nothing in this Agreement is intended to excuse Schnitzer from liability for penalties or other judicial or administrative remedies, including the imposition of a conditional or unconditional order for abatement.

6. **Notices**. All notices required pursuant to this Agreement shall be in writing and shall be served either by personal delivery; by overnight courier, postage prepaid; by facsimile (with proof of transmission); or by e-mail, to Schnitzer and the District at the

respective addresses set forth below. Service shall be effective on the day of receipt, so long as delivery is made by no later than 5:00 P.M. local time.

To Schnitzer:

Scott B. Sloan
Vice President, Corporate, Environmental
Schnitzer Steel Industries, Inc.
23711 63rd Avenue SE
Woodinville, WA 98072
Telephone: (425) 420-1863
E-Mail: ssloan@schn.com

To the District:

Jeffrey Gove
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Telephone: (415) 749-5032
E-Mail: jgove@baaqmd.

With copies to:

Margaret Rosegay, Esq.
Partner
Pillsbury Winthrop Shaw Pittman LLP
Four Embarcadero Center
San Francisco, CA 94111
Telephone: (415) 983-1305
E-Mail:
margaret.rosegay@pillsburylaw.com

With a copy to:

Brian C. Bunger
District Counsel
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Telephone: (415) 749-4920
Facsimile: (415) 749-5103
E-Mail, c/o Susan Adams, Assistant Counsel: sadams@baaqmd.gov

7. **Modification and Termination**.

a. **Modification**. This Agreement may be amended, supplemented, or extended only by a written instrument signed by Schnitzer and the District, or their successors-in-interest. However, such execution may be in counterparts and, when so executed, shall be deemed to constitute one and the same document.

b. **Termination**. This Agreement shall terminate on January 31, 2019.

8. **Breach of Agreement by Schnitzer**. If Schnitzer fails to perform or comply with any of the terms of this Agreement, Schnitzer will be in breach of this Agreement. At its sole discretion, the District may seek civil penalties, and take any action, including civil litigation, against Schnitzer.

Miscellaneous Provisions.

9. This settlement, without litigation:

a. is fair, reasonable, and in the interests of the District, Schnitzer, and the public; and

b. precludes the District from seeking criminal or civil penalties under California Health and Safety Code Sections 42400 *et seq.*, or taking administrative action, for noncompliance with the requirements of the Permit to Operate's Permit Condition No. 23114 (6), as it pertains to the permitted number ship calls per calendar year, except as otherwise provided for in this Agreement.

10. The title headings of the respective articles of this Agreement are inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

11. **Successors Bound**. The terms of this Agreement shall inure to the benefit of and be binding upon the Parties and their respective predecessors, successors, subsidiaries, partners, limited partners, agents, principals, and assigns.

12. **Severability**. If any provision of this Agreement or the application of this Agreement to either Schnitzer or the District is held by any judicial authority to be invalid, the application of such provision to the other Party and the remainder of this Agreement shall remain in force and shall not be affected thereby, unless such holding materially changes the terms of this Agreement.

13. **Authority to Execute**. Each of the undersigned represents and warrants that he or she has full and complete lawful authority to grant, bargain, convey, and undertake the rights and duties contained in this Agreement, and that he or she has full and complete lawful authority to bind any respective principals, successors, subsidiaries, partners, limited partners, agents, and assigns to this Agreement. Each of the undersigned understands and agrees that this representation and warranty is a material term of this Agreement, without which it would not have been executed.

14. **Opportunity to Consult with Counsel**. Schnitzer and the District hereby affirm and acknowledge that they have read this Agreement, that they know and understand its terms, and that they have signed it voluntarily and on the advice of counsel of their own choosing. The Parties have had the opportunity to consult with their attorneys and any other consultant each deemed appropriate prior to executing this Agreement.

15. **California Law and Venue**. This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of California, without regard to California's choice of law rules. Venue shall be the County of San Francisco, California.

16. **Entire Agreement**. The mutual obligations and undertakings of Schnitzer, on the one hand, and the District, on the other hand, expressly set forth in this Agreement are the sole and only consideration for this Agreement and supersede and replace all prior negotiations and proposed agreements between Schnitzer and the District, written or oral, on the specific matters addressed in this Agreement. Schnitzer and the District each acknowledges that no other party, nor the agents nor attorneys of any other party, has made any promise, representation, or warranty whatsoever (express or implied), not contained herein, to induce the execution of this Agreement. This Agreement constitutes the full, complete, and final statement of Schnitzer and the District on the matters addressed by this Agreement.

17. This Agreement may be executed in one or more counterparts, each of which shall have the same force and effect as an original, but all of which together shall constitute one and the same instrument.

18. This Agreement shall be deemed to have been jointly drafted by the Parties for the purpose of applying any rule of construction to the effect that ambiguities are to be construed against the party drafting the Agreement.

19. Any material breach of this Agreement by either Party shall make the Agreement subject to termination upon notice by the non-breaching Party.

20. **No Waiver**. The waiver of any provision or term of this Agreement shall not be deemed as a waiver of any other provision or term of this Agreement. The mere passage of time, or failure to act upon a breach, shall not be deemed as a waiver of any provision or term of this Agreement.

21. **Effective Date**. The Effective Date of this Agreement shall be the Date of Execution of this Agreement. The Date of Execution of this Agreement shall be the date that the District's Executive Officer/Air Pollution Control Officer executes this Agreement.

IN WITNESS WHEREOF, the Parties acknowledge and accept this Agreement, effective as of the Date of Execution.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

By: _____
Jack P. Broadbent
Air Pollution Control Officer/
Executive Officer

Dated: November 20, 2018

Approved as to form:

By: _____
Susan Adams, Esq.
Assistant Counsel

Dated: November 16, 2018

SCHNITZER STEEL INDUSTRIES, INC.

By: _____
Scott B. Sloan
Vice President, Corporate
Environmental
Schnitzer Steel Industries, Inc.

Dated: November 16, 2018

Approved as to form:

By: _____
Margaret Rosegay, Esq.
Pillsbury Winthrop Shaw Pittman LLP

Dated: November 13, 2018

Exhibit D

Compliance and Settlement Agreement, Calendar Year 2020

November 13, 2020

COMPLIANCE AND SETTLEMENT AGREEMENT

THIS COMPLIANCE AND SETTLEMENT AGREEMENT **("AGREEMENT")** is entered into and becomes effective as of the Date of Execution by and between **SCHNITZER STEEL INDUSTRIES, INC. ("SCHNITZER")** and the **BAY AREA AIR QUALITY MANAGEMENT DISTRICT ("DISTRICT"),** hereinafter sometimes individually referred to as a "**Party**" and collectively as the "**Parties.**"

RECITALS

1. The District is the regional agency with primary responsibility for the control of air pollution from stationary sources in the San Francisco Bay Area air basin. Pursuant to that responsibility, the District is authorized to regulate stationary sources, such as metal recycling operations within the air basin, which authority includes the requirement that facilities obtain and maintain District permits to operate certain stationary sources. *See California Health & Safety Code Sections 40001, 40701, 40752, 42400-42421, and 42451-42454.*

2. Pursuant to that authority, the District has required and issued to Schnitzer a permit to operate the metal recycling facility that it owns and operates at 1101 Embarcadero West, Oakland, California 94607 ("Facility"), listed as District Permit to Operate No. 208, formerly A0208 ("Permit").

3. As described by Schnitzer, a significant percentage of the processed scrap metal produced by the Facility, including primarily ferrous "shred" and Heavy Melt Steel, is loaded onto ocean-going vessels and sold to customers around the world. The Facility includes a dock on the Oakland Inner Harbor, where the ships are berthed during loading operations. Given the nature of the products produced by the Facility, and the location of customer facilities (e.g., foreign steel mills and smelters) that use these recycled metals as raw materials in the production of steel and other metals, Schnitzer represents that ship transport is the only feasible way to transport these products to foreign, overseas markets.

4. Since June 2008, Permit Condition No. 23114 (6) of the Permit has authorized a total of 26 ships to call at the Facility each calendar year.

5. According to Schnitzer, over the past several years, the capacity of the ships that are dispatched to the Facility has changed, affecting the total number of ships that are needed to move the Facility's finished products to market. In general, the average rated deadweight tonnage (DWT) of ships calling at Schnitzer's dock has decreased, meaning that more ships are needed to move the same amount of material. In some cases, this is due to restrictions at destination ports that cannot accommodate the draft required for larger, or more heavily loaded, vessels. In other

cases, the vessels are scheduled to pick up material from other facilities and thus cannot be fully loaded at the Oakland Facility.

6. On July 17, 2018, Schnitzer submitted an application to the District to modify the Permit to increase the permitted number of ship calls at the Facility to 32 ships per calendar year. As part of its evaluation of the permit application, the District conducts an environmental review of the proposed modification pursuant to the California Environmental Quality Act ("CEQA"). The District may not approve the permit modification until CEQA's requirements are met. The District, which is the lead agency for this proposed permit modification under CEQA, is in the midst of that review.

7. On November 20, 2018, the District and Schnitzer entered into a Compliance and Settlement Agreement which allowed an additional four (4) ships to call at the Facility in calendar year 2018 based on Schnitzer's then-current production rates and customer commitments. Schnitzer represents that while it did not seek a temporary increase in the number of ship calls in 2019 due to a subsequent decline in market conditions, Schnitzer anticipates that due to its improved market conditions this year, it will need up to six additional ship calls to meet customer commitments for the remainder of this year.

8. Exceeding 26 ship calls this calendar year would violate the Permit. For this reason, Schnitzer seeks a similar compliance and settlement agreement with the District that enables Schnitzer to increase the number of allowable ship calls from 26 to 32 for calendar year 2020. These additional ship calls will enable Schnitzer to continue its scrap metal recycling operations without need to curtail production or to stockpile large quantities of material on site. The additional ship calls will result increased emissions of oxides of nitrogen (NOx), precursor organic compounds (POCs), carbon monoxide (CO), sulfur dioxide (SO2), and particulate matter in the form of diesel exhaust particulate matter (PM).

9. If Schnitzer were forced to shut down or otherwise significantly curtail its operations to maintain compliance with the current ship call limit, there is insufficient shredding capacity in the state to process the end-of-life automobiles, appliances and other light iron metal products that would otherwise be processed by Schnitzer. As a consequence, the large volumes of cars, appliances and miscellaneous scrap materials processed by Schnitzer would accumulate in other locations, placing undue burdens on feeder yards. Allowing the Facility to remain in normal operation avoids disruption within the industry, maintains stockpiles within their normal size ranges and minimizes risks associated with over-accumulation of material.

10. Schnitzer asserts that:

(a) Schnitzer would suffer severe economic hardship if it were forced to cease or curtail operations in order to comply with the current annual limit on the number of ships that may call at the Facility;

(b) Schnitzer has no other feasible means of transporting its finished products to foreign, overseas markets; and

(c) Temporary shutdown or curtailment of operations due to loss of shipping capability would contribute to the accumulation of very large quantities of processed or unprocessed scrap metal, creating operational disruption and increasing the risks associated with over-accumulation of material at the Facility or at alternate storage locations.

11. In seeking a compliance and settlement agreement to address its permit non-compliance pending issuance of an amended Permit to Operate:

(a) Schnitzer agrees that it shall pay excess emission fees pursuant to District Regulation 3, Schedule I, Attachment A, Table I for excess emissions associated with the increased number of ship calls, and

(b) Schnitzer agrees it will pay a stipulated civil penalty for exceeding the permitted number of ships prescribed in the Permit.

12. Based on the foregoing, the District agrees to enter into a compliance and settlement agreement that commences as of the Effective Date of this Agreement and ends February 28, 2021unless extended as specified herein.

NOW, THEREFORE, based on the foregoing recitals, and in consideration of the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Schnitzer agrees to, and shall, comply with all terms of this Agreement.

2. **Compliance Period.** The compliance period of this Agreement commences as of the Effective Date of the Agreement and ends the later of February 28, 2021 or the date that Schnitzer has paid all excess emission fees and civil penalties required under this Agreement and that the District has confirmed in writing that such payments are deposited and cleared by the District's financial institution ("Compliance Period"). During the Compliance Period, until no later than December 31, 2020, Schnitzer shall be entitled to up to 32 ship calls during calendar year 2020.

3. **Excess Emission Fees and Civil Penalties.**

a. **Excess Emission Fee.** Schnitzer shall pay to the District an excess emission fee that is attributable to the additional emissions of NOx, POC, CO, SO2, and PM in the form of diesel exhaust particulate matter, for each of the up to six (6) additional ship calls allowed under this Agreement. The payment shall be based on the rates per pound for the respective air contaminant prescribed in District Regulation 3, Schedule A, Attachment I, Table I. Schnitzer shall deliver the remittance to the District no later than January 31, 2021, accompanied by documentation explaining how the fee was calculated.

b. **Civil Monetary Penalties.** No later than January 31, 2021, Schnitzer shall remit to the District a civil monetary penalty in the amount of $5,000 for each ship that calls at the Facility in excess of the number of ships currently allowed under Permit to Operate No. 208.

c. Schnitzer shall pay all monies by corporate check made payable to the "Bay Area Air Quality Management District." Schnitzer shall deliver the payments by hand or certified mail to the District, to the attention of Brian C. Bunger, District Counsel, at the address for notices to the District set forth in Paragraph 6 below.

4. **Effect of Agreement.** These payments will be in full and final settlement of any and all other claims that have been or could have been asserted by the District arising out of or relating to Schnitzer's violation of the annual limit on ship calls contained in its Permit to Operate.

5. **Compliance with District Regulations during the Compliance Period.**

a. Throughout the Compliance Period, Schnitzer shall remain in compliance with all applicable District Regulations and its Permit, except Permit Condition No. 23114 (6), as it pertains to the number of permitted calendar year ship calls. Any violation of District Regulations or of the Permit, exclusive of Permit Condition No. 23114 (6), as it pertains to ship calls, is a separate violation, subjecting Schnitzer to separate notices of violation and civil penalties.

b. The District reserves the right to take future enforcement actions arising out of violations not covered by this Agreement. Except as otherwise provided herein, nothing in this Agreement is intended to excuse Schnitzer from liability for penalties or other judicial or administrative remedies, including the imposition of a conditional or unconditional order for abatement.

6. **Notices.** All notices required pursuant to this Agreement shall be in writing

and shall be served either by personal delivery; by overnight courier, postage prepaid; by facsimile (with proof of transmission); or by e-mail, to Schnitzer and the District at the respective addresses set forth below. Service shall be effective on the day of receipt, so long as delivery is made by no later than 5:00 P.M. local time.

To Schnitzer:

Scott B. Sloan
Vice President, Corporate, Environmental
Schnitzer Steel Industries, Inc.
23711 63rd Avenue SE
Woodinville, WA 98072
Telephone: (425) 420-1863
E-Mail: ssloan@schn.com

With copies to:

Margaret Rosegay, Esq.
Partner
Pillsbury Winthrop Shaw Pittman LLP
Four Embarcadero Center
San Francisco, CA 94111
Telephone: (415) 983-1305
E-Mail:
margaret.rosegay@pillsburylaw.com

To the District:

Jeffrey Gove
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Telephone: (415) 749-4789
E-Mail: jgove@baaqmd.gov

With a copy to:

Brian C. Bunger
District Counsel
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Telephone: (415) 749-4920
Facsimile: (415) 749-5103
E-Mail, c/o Susan Adams, Assistant Counsel: sadams@baaqmd.gov

7. **Modification and Termination.**

a. **Modification.** This Agreement may be amended, supplemented, or extended only by a written instrument signed by Schnitzer and the District, or their successors-in-interest. However, such execution may be in counterparts and, when so executed, shall be deemed to constitute one and the same document.

b. **Termination.** This Agreement shall terminate on February 28, 2021 unless extended in accordance with subsection a. above.

8. **Breach of Agreement by Schnitzer.** If Schnitzer fails to perform or comply with any of the terms of this Agreement, Schnitzer will be in breach of this Agreement. At its sole discretion, the District may seek civil penalties, and take any action, including civil litigation, against Schnitzer.

Miscellaneous Provisions.

9. This settlement, without litigation:

a. is fair, reasonable, and in the interests of the District, Schnitzer, and the public; and

b. precludes the District from seeking criminal or civil penalties under California Health and Safety Code Sections 42400 *et seq.*, or taking administrative action, for noncompliance with the requirements of Condition No. 23114 (6) of the Permit, as it pertains to the permitted number ship calls per calendar year, except as otherwise provided for in this Agreement.

10. The title headings of the respective articles of this Agreement are inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

11. **Successors Bound.** The terms of this Agreement shall inure to the benefit of and be binding upon the Parties and their respective predecessors, successors, subsidiaries, partners, limited partners, agents, principals, and assigns.

12. **Severability.** If any provision of this Agreement or the application of this Agreement to either Schnitzer or the District is held by any judicial authority to be invalid, the application of such provision to the other Party and the remainder of this Agreement shall remain in force and shall not be affected thereby, unless such holding materially changes the terms of this Agreement.

13. **Authority to Execute.** Each of the undersigned represents and warrants that he or she has full and complete lawful authority to grant, bargain, convey, and undertake the rights and duties contained in this Agreement, and that he or she has full and complete lawful authority to bind any respective principals, successors, subsidiaries, partners, limited partners, agents, and assigns to this Agreement. Each of the undersigned understands and agrees that this representation and warranty is a material term of this Agreement, without which it would not have been executed.

14. **Opportunity to Consult with Counsel.** Schnitzer and the District hereby affirm and acknowledge that they have read this Agreement, that they know and understand its terms, and that they have signed it voluntarily and on the advice of counsel of their own choosing. The Parties have had the opportunity to consult with their attorneys and any other consultant each deemed appropriate prior to executing this Agreement.

15. **California Law and Venue.** This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of California, without regard to California's choice of law rules. Venue shall be the County of San Francisco, California.

16. **Entire Agreement.** The mutual obligations and undertakings of Schnitzer, on

the one hand, and the District, on the other hand, expressly set forth in this Agreement are the sole and only consideration for this Agreement and supersede and replace all prior negotiations and proposed agreements between Schnitzer and the District, written or oral, on the specific matters addressed in this Agreement. Schnitzer and the District each acknowledges that no other party, nor the agents nor attorneys of any other party, has made any promise, representation, or warranty whatsoever (express or implied), not contained herein, to induce the execution of this Agreement. This Agreement constitutes the full, complete, and final statement of Schnitzer and the District on the matters addressed by this Agreement.

17. This Agreement may be executed in one or more counterparts, each of which shall have the same force and effect as an original, but all of which together shall constitute one and the same instrument.

18. This Agreement shall be deemed to have been jointly drafted by the Parties for the purpose of applying any rule of construction to the effect that ambiguities are to be construed against the party drafting the Agreement.

19. Any material breach or this Agreement by either Party shall make the Agreement subject to termination upon notice by the non-breaching Party.

20. **No Waiver.** The waiver of any provision or term of this Agreement shall not be deemed as a waiver of any other provision or term of this Agreement. The mere passage of time, or failure to act upon a breach, shall not be deemed as a waiver of any provision or term of this Agreement.

21. **Effective Date.** The Effective Date of this Agreement shall be the Date of Execution of this Agreement. The Date of Execution of this Agreement shall be the date that the District's Executive Officer/Air Pollution Control Officer executes this Agreement.

IN WITNESS WHEREOF, the Parties acknowledge and accept this Agreement, effective as of the Date of Execution.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

By: _____
Jack P. Broadbent
Air Pollution Control Officer/
Executive Officer

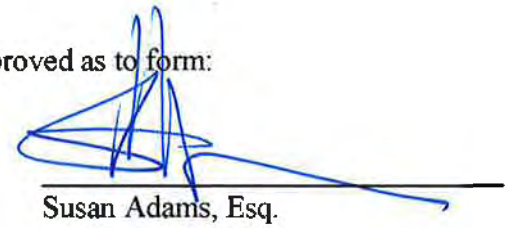
Dated: November 13th 2020

SCHNITZER STEEL INDUSTRIES, INC.

By: _____
Scott B. Sloan
Vice President, Corporate
Environmental
Schnitzer Steel Industries, Inc.

Dated: November 6, 2020

Approved as to form:

By: 

Susan Adams, Esq.
Assistant Counsel

Dated: November 12, 2020

Approved as to form:

By: Meg Rosegay

Margaret Rosegay, Esq.
Pillsbury Winthrop Shaw Pittman LLP

Dated: November 6, 2020

Exhibit E

Addendum to Compliance and Settlement Agreement, Calendar Year 2021

November 16, 2021

ADDENDUM TO
COMPLIANCE AND SETTLEMENT AGREEMENT

THIS ADDENDUM TO COMPLIANCE AND SETTLEMENT AGREEMENT **("AGREEMENT")** is entered into and becomes effective as of the Date of Execution by and between **SCHNITZER STEEL INDUSTRIES, INC. ("SCHNITZER")** and the **BAY AREA AIR QUALITY MANAGEMENT DISTRICT ("DISTRICT"),** hereinafter sometimes individually referred to as a **"Party"** and collectively as the **"Parties."**

RECITALS

1. On November 6, 2020, the District and Schnitzer entered into the foregoing Compliance and Settlement Agreement increasing the allowable number of ships that may call at Schnitzer's Oakland Facility, pursuant to Condition 26401(8) of Permit to Operate No. 208, from 26 ships to 32 ships during Calendar Year 2020. Condition 26401(8) was replaced by Condition 27085(8) in Schnitzer's renewed Permit to Operate, applicable during the period November 1, 2020 through October 31, 2021 (the "2021 Permit").

2. Schnitzer's application to the District to modify its Permit to increase the permitted number of ship calls at the Facility remains pending while the District completes an environmental assessment of the proposed modification pursuant to the California Environmental Quality Act.

3. Schnitzer has advised the District that, for Calendar Year 2021, it expects to exceed the number of allowed ship calls (26) as set forth in Condition 27085(8) of its 2021 Permit. Condition 27085(8) will be superseded by Condition 27410(8) of Schnitzer's current Permit (effective November 1, 2021) which condition will take effect upon Schnitzer's start-up of the Regenerative Thermal Oxidizers currently being installed at the Facility.

4. Paragraph 7.a. of the Compliance and Settlement Agreement dated November 6, 2020, provides as follows:

> **Modification.** This Agreement may be amended, supplemented, or extended only by a written instrument signed by Schnitzer and the District, or their successors-in-interest. However, such execution may be in counterparts and, when so executed, shall be deemed to constitute one and the same document.

NOW, THEREFORE, based on the foregoing recitals, and in consideration of the mutual promises and covenants contained in this Addendum and in the November 6, 2020 Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. The number of allowed ship calls at the Facility for Calendar Year 2021 shall be increased from 26 ships to a total number of ships and/or barges, or any combination thereof, that have emissions no greater than the emissions attributable to 32 ship calls, as determined using a methodology approved by the District.

2. Except as set forth in this Addendum, all terms and conditions of the November 6, 2020 Agreement shall remain in full force and effect and applicable to this Addendum, including without limitation Schnitzer's obligation to pay a civil monetary penalty in the amount of $5,000 for each ship (or ship/barge equivalent) that calls at the Facility in excess of the number of ships currently allowed under Permit to Operate No. 208 and to pay to the District an excess emission fee that is attributable to the additional emissions of NOx, POC, CO, SO2, and PM in the form of diesel exhaust particulate matter the rates per pound for the respective air contaminant prescribed in District Regulation 3, Schedule A, Attachment I, Table I, as currently in effect.

3. The payments required by Paragraph 2 hereof shall be made no later than January 31, 2022.

4. This Addendum shall terminate on February 28, 2022.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

By: _____
Jack P. Broadbent
Air Pollution Control Officer/
Executive Officer

Dated: November 16, 2021

Approved as to form:

By: Madeline Stone
Madeline Stone, Esq.
Assistant Counsel

Dated: November 10, 2021

SCHNITZER STEEL INDUSTRIES, INC.

By: _____
Scott B. Sloan
Vice President, Corporate
Environmental
Schnitzer Steel Industries, Inc.

Dated: November 9, 2021

Approved as to form:

By: Margaret Rosegay
Margaret Rosegay, Esq.
Pillsbury Winthrop Shaw Pittman LLP

Dated: November 9, 2021

Exhibit F

Excess Emission Calculations

PRIVILEGED AND CONFIDENTIAL – ATTORNEY WORK PRODUCT
PREPARED AT THE REQUEST OF COUNSEL

INPUT

OGV Main engine power per engine (kW) =	7158
OGV Auxiliary engine power per engine (kW) =	1,829
Engine Load[5]	Revised

Table 1-4: Baseline Emissions Calculations - Criteria Pollutants

Ocean-Going Vessel (OGV) Trips per year = 1

	Engine		Maximum		Emission Factors (g/kW-hr)							Emissions: Per Trip (lbs)					Emissions: Annual (tons)							
	Power	Load	Hrs per																					
Ocean-Going Vessel Operations	**kW**	**%**	**Trip**	**Year**	**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO_2**	**CH_4**	**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO_2**	**CH_4**	PM_{10} (lb/yr)
Main Engine Transit Leg 1 (and out)[1]	0	83	0.00	0	1.10	17.00	0.36	0.78	0.25	588.00	0.07	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Main Engine Transit Leg 2 (and out)[1]	0	26	0.00	0	1.10	17.00	0.36	0.78	0.25	588.00	0.07	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Main Engine Transit RSZ Leg 3 (and out)[1]	0	8	0.00	0	1.10	17.00	0.36	0.78	0.25	588.00	0.07	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Main Engine Maneuvering Leg 4 (and out)[1]	0	5	0.00	0	1.10	17.00	0.36	0.78	0.25	588.00	0.07	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Engine Transit[2]	0	17	0.00	0	1.10	13.90	0.40	0.52	0.25	690.00	0.09	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Engine RSZ[2]	0	17	0.00	0	1.10	13.90	0.40	0.52	0.25	690.00	0.09	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Engine Maneuvering[2]	0	45	0.00	0	1.10	13.90	0.40	0.52	0.25	690.00	0.09	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Engine Hoteling at berth[2]	0	10	0.00	0	1.10	13.90	0.40	0.52	0.25	690.00	0.09	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Boiler Manuevering[3]	0	0	0.00	0.0	0.20	2.00	0.57	0.11	0.13	970	0.03	0.0	0.0	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Auxiliary Boiler Hoteling[3]	0	0	0.00	0.0	0.20	2.00	0.57	0.11	0.13	970	0.03	0.0	0.0	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
TOTAL EMISSIONS (OGVs)												0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

	Engine		Maximum		Emission Factors							Emissions: Per Trip (lbs)					Emissions: Annual (tons)							
	Power	Load	Hrs per		CO	NO_x	SO_2	HC	PM_{10}	CO_2	CH_4													
Tugboat Operations*[4]	**hp**	**%**	**Trip**	**Year**	**(g/hp-hr)**		**(lb/hr)**	**(g/hp-hr)**		**(lb/hr)**		**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO_2**	**CH_4**	PM_{10} (lb/yr)
Main Engine Idle (to meet ship)	2600	10	0.00	0	2.99	12.98	0.01	0.84	0.50	0.00		0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000		0.00
Main Engine Running Light (escort ship inbound)	2600	30	0.00	0	2.99	12.98	0.02	0.84	0.50	0.00		0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000		0.00
Main Engine Idle (maneuver ship to berth)	2600	30	0.00	0	2.99	12.98	0.02	0.84	0.50	0.00		0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000		0.00
Main Engine Running Light (return to ship)	2600	10	0.00	0	2.99	12.98	0.01	0.84	0.50	0.00		0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000		0.00
Main Engine Idle (maneuver ship out from berth)	2600	80	0.00	0	2.99	12.98	0.04	0.84	0.50	0.00		0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000		0.00
Main Engine Assist Pushing Full (escort ship outbound)	2600	80	1.50	1	2.99	12.98	0.04	0.84	0.50	6715.20		20.57	89.28	0.06	5.78	3.44	0.003	0.015	0.000	0.001	0.001	1.679		1.15
Main Engine Idle (tug return to base)	2600	10	1.00	1	2.99	12.98	0.01	0.84	0.50	1231.12		1.71	7.44	0.01	0.48	0.29	0.001	0.004	0.000	0.000	0.000	0.616		0.29
Auxiliary Engine	0	31	2.50	3	4.94	13.00		1.71	0.71			0.00	0.00		0.00	0.00	0.000	0.000		0.000	0.000			0.00
TOTAL EMISSIONS (Tugs)												22.28	96.72	0.08	6.26	3.73	0.00	0.02	0.00	0.00	0.00	2.29	0.00	
TOTAL EMISSIONS (OGVs and Tugs)												22.28	96.72	0.08	6.26	3.73	0.00	0.02	0.00	0.00	0.00	2.29	0.00	

Maximum Daily (lbs) *				
CO	**NO_x**	**SO_2**	**HC**	**PM_{10}**
22.28	96.72	0.075	6.2593	3.726

*Max daily emissions do not include auxiliary boiler emissions.

OGV Main engines, auxiliary engines, and auxiliary boilers will use 0.1%S distillate fuel by Jan 1, 2012.

1. Appendix D CARB's Emissions Estimation Methodology for Ocean-Going Vessels, Table II-6, for slow engine speed, p. D-15.
2. Appendix D CARB's Emissions Estimation Methodology for Ocean-Going Vessels, Table II-8, for medium engine speed, p. D-16.
3. Auxiliary Boiler Emission Factors from ship emission calculation spreadsheet for Schnitzer Steel, provided by the District on 7/30/2018.
4. Tugboat emissions are taken from the ship emission calculation spreadsheet for Schnitzer Steel, provided by the District on 7/30/2018.
   None of the assumptions for the tugboats emission calculations have been changed.
5. Original engine loads are default values in the shipping emission spreadsheet provided by the BAAQMD.
   Revised engine loads are estimated based on CARB's Emissions Estimation Methodology for Ocean-Going Vessels, Appendix D, Section 4 Load Factor, p. D-13, and propeller law.

	Annual (tons)							Increment, this ship (tons)						
	CO	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO_2**	**CH_4**	**CO**	**NO_x**	**SO_2**	**HC**	**PM_{10}**	**CO_2**	**CH_4**
Pre-Project Baseline (23 ship calls)	1.740	15.108	0.355	0.717	0.350	742.407	0.065							
26 ship calls	1.992	17.294	0.397	0.821	0.400	834.235	0.074	0.252	2.186	0.042	0.104	0.049	91.828	0.009
27 ship calls	2.068	17.950	0.410	0.852	0.414	861.783	0.077	0.076	0.656	0.013	0.031	0.015	27.548	0.003
28 ship calls	2.143	18.606	0.422	0.883	0.429	889.332	0.079	0.076	0.656	0.013	0.031	0.015	27.548	0.003
29 ship calls	2.219	19.262	0.435	0.914	0.444	916.880	0.082	0.076	0.656	0.013	0.031	0.015	27.548	0.003
30 ship calls	2.295	19.917	0.448	0.945	0.459	944.429	0.085	0.076	0.656	0.013	0.031	0.015	27.548	0.003

Reg 3 Fees ($/lb)	$5.83	$5.83	$5.83	$5.83	$29.00		
Excess Emission Fee per Ship	$882.48	$7,646.72		$362.15		$8,891.34	without PM10
					$856.17	$9,747.51	with PM10

Excess Emissions					
CO	**NO_x**	**SO_2**	**POC**	**DPM**
Excess Emissions per Ship (tons)	0.076	0.656	0.013	0.031	0.015
Number of Excess Ships	1	1	1	1	1
Total Excess Emissions (tons)	0.076	0.656	0.013	0.031	0.015
Reg 3 Fee ($/lb)	$5.83	$5.83	$5.83	$5.83	$29.00
Excess Emission Fee	$882.48	$7,646.72	$147.03	$362.15	$856.17

Total Excess Emission Fee **$9,894.55**