



VISTA METALS CORP.



September 20, 2021

James McCreary, Air Quality Specialist
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

Re: Feedback on Preliminary Draft Rule Language for Proposed Rule 1147.2

Vista Metals Corp. appreciates the continuing opportunities to participate in the rulemaking process for Proposed Rule 1147.2. We are providing written feedback on the presented Preliminary Draft Rule Language published on September 9, 2021. Our feedback, composed of questions, comments and suggestions and indexed to the numbering in the Preliminary Draft Rule, is as follows:

Item#1: (d)(3) Permit Application:

We have many devices with RECLAIM NO_x permit limits higher than the newly proposed limits with ages both above and below 12 years. Instead of filing multiple applications as each device ages to 12 years, it makes more sense to file a one-time permit application for all our devices, no matter the age. All our devices currently comply with the newly proposed NO_x limits so our application would contain purely conditional (not operational) changes. Since these permit changes are being driven by rule changes at the district level, will there be any application fee discounts or waivers?

Item #2: (e) Demonstration of Less Than 1 Pound of NO_x Per Day:

We understand the intent of this condition is for equipment operators to pick one of the four listed options. The language reads like all conditions are required to be met. Please clarify.

Item #3: (f) Burner Age:

We understand the intent of this condition is for equipment operators to determine the burners age using one of the listed options. The language reads like all conditions are required to be met. Please clarify.



Item #4: (g) Compliance Determination:

Participants in RECLAIM currently have a lot of latitude on when source testing is performed. Current requirements allow test completion and result submission to be done within a multiyear compliance period. With this in mind, we would ask for consideration of a “year of” test and submission period vs. by the end of a specific month (e.g., testing must be completed sometime within the 3rd or 5th year instead of by the 36th or 60th month for each device). For companies with multiple units that require testing, a “year of” requirement would make it easier to coordinate and complete while minimizing cost and production disruption.

Item #5: (h)(3) Monitoring and Source Testing:

Although not stated in the currently published Draft Rule Language, in the Working Group #9 virtual meeting, presentation slide 35, bullet point 4 stated:

“Source test shall be conducted at maximum temperature at which the unit normally operates.”

This statement was a surprising addition and could be highly problematic for the following reasons:

1. Although never explicitly placed on any of the previous working group agendas, source testing has been talked about multiple times in previous meeting and generally in the context of performance guarantees from burner manufacturers. Guarantees are typically based on both a maximum process temperature **and** a maximum burner turndown ratio. The above condition does not consider burner turndown performance characteristics and may make it impossible for a company to obtain performance guarantees from burner manufacturers for replacement burners.
2. Many batch processes have combustion systems that rapidly drive heat into a loaded processing device and then, upon approaching the setpoint, quickly reduce burner output. During times of high burner output, device interiors tend to operate at positive pressures. Most production device openings do not seal perfectly tight which means that outside air can be introduced into device interiors through air leaks. Operating at positive pressure keeps leaked outside air to a minimum and allows a true measurement of the device emissions.



When a device is operating at high temperature and low burner output, the natural draft of the hot air up the stack will overcome any type of positive pressure and outside air can be introduced into the device through leaks. When this occurs, source testing measurements will be diluted and the measured device emissions will not be representative of the true emissions from the burners. When the oxygen correction calculation is performed, the final NO_x and CO results will be higher than what the burners are producing. The lower the burner output, the worse this problem can be.

3. During source testing, a Relative Accuracy Audit (RAA) is conducted comparing the mass emitted from the stack vs. calculated theoretical mass that should be emitted based on measured gas usage. The measured value and the calculated value must be within +/- 15% of each other for the test to be valid. It is possible on highly efficient well sealed devices with large cross sectional stack areas and short stacks to have exhaust flow rates that are lower than what standard pitot tubes can reliably measure. Without a reliable flow measurement RAA cannot be reliably calculated and the source test will not be valid.

Taking the above three listed items into account, we offer for consideration the following source testing alternative language in lieu of using normal maximum operating temperature. We would suggest both items be included, giving the company being tested the option to choose:

1. For batch type processing equipment, burner output shall not operate at less than a 3:1 turndown ratio during the source testing period; or
2. For devices that have previously been source tested with a district approved protocol, source testing shall be done at device temperatures and combustion system outputs consistent with previously performed tests.

Item #6: (h)(5)(A) Tuning:

The new NO_x emission limits in Proposed Rule 1147.2 dramatically reduce the BARCT NO_x emission limits currently listed in rule 1147. The new proposed rule dramatically lowers the headroom between actual burner capabilities and compliance limits. Tuning burners in a device 40 operating hours or 7 days (whichever is longer) prior to a source test could be highly problematic because:



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1. Atmospheric conditions could be dramatically different on the day a unit is tuned vs. the day it is tested. While this atmospheric change should not dramatically change the results, the change could still be measurable and have an impact.
2. Tuning is generally going to be performed with a handheld analyzer which may measure and display differently when compared to the results of a highly accurate CEMS unit on a source test truck. We use a highly regarded common brand portable analyzer. This analyzer has a published accuracy of +/- 5ppm NOx on a 0-100 ppm scale.

The small differences between proposed rule emission limits vs. burner performance capability, coupled with changes in atmospheric conditions and measurement error introduced using different measuring devices (portable analyzer used for tuning vs. CEMS used for source test) could lead to issues with test results.

We would suggest elimination of the 40 hour/7day period and language added to allow tuning at any time prior to the start of a source test, but once the test begins, no additional tuning is allowed. Additionally, once the test is complete, no additional tuning should be allowed unless it is done in the normal course of equipment maintenance or repair.

Item #7: (h)(5)(C) Source Test Due Dates:

As previously mentioned in **Item #4**, we would suggest the due date for source testing be within a one-year defined period to provide more flexibility around test timing and grouping of devices.

Should yourself or anybody from the SCAQMD wish to talk about any these items in more detail please contact me at (909) 829-6129 or shayne@vistametals.com.

Sincerely,

A handwritten signature in blue ink that reads 'Shayne Seever'.

Shayne Seever
Director of Special Project

Cc: Susan Nakamura (SCAQMD), Mike Morris (SCAQMD), Rodolfo Chacon (SCAQMD)