

INTEGRATED IRON AND STEEL RULE HAP LIMITS

Unless EPA reconsiders standards in the proposed rule, the domestic supply of high purity grades of steel for critical applications may be replaced by imported steel produced at higher emission rates. EPA should correct the flawed, overly stringent opacity limits and must refrain from pursuing other new limits for trace amounts of HAPs that fail to meet achievable, technical and economic feasibility thresholds especially when EPA has determined the residual risks after the initial MACT standard established in 2003 are low and acceptable.

EPA's proposed limits are based on limited testing data and do not consider variability of the process, raw materials, or sampling and analytical methodology. EPA assumed all sources could meet the proposed limits without investing in new emission controls, however, according to the summary below the proposed limits are not achievable without investing in new controls. Moreover, most of the proposed limits have not been controlled for any similar source globally and are not technically feasible or economically reasonable. New information submitted to EPA supports the changes requested below.

EPA should reconsider the proposed limits for the II&S NESHAP in light of the following:

Limited Data

EPA should not finalize the proposed standards for existing sources because they are based on a limited dataset.

- For existing sources, the MACT floor cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources for source categories with 30 or more sources, or the best-performing five sources for source categories with fewer than 30 sources.
 - There are less than five sources represented in the **EPA dataset**¹ for all 15 of the proposed standards for existing sources; and for 9 of the 15 standards there are only two sources represented².
- In the **EPA dataset**, 8 out of 15 proposed standards for existing sources are based on “limited” data based on EPA’s definition of “limited datasets” (meaning less than 7 data points)³; typically, only two stack tests)
 - In the **Combined dataset (EPA dataset plus additional industry-supplied data)**, only 2 out of 15 standards would be based on “limited” data, making the combined dataset more representative.
 - Seven data points (from two stack tests total, not two tests per emission unit in the floor pool) is simply not enough to capture the variability of the process, products produced, material inputs, and seasonality which are reasonably expected to influence emissions.

¹ **EPA dataset** means the data used to develop the standards described in EPA document ID: EPA-HQ-OAR-2002-0083-1444

² See Table 17 in EPA document ID: EPA-HQ-OAR-2002-0083-1444

³ See ‘Step 7’ in EPA docket number EPA-HQ-OAR-2002-0083-1444

Future Compliance Concerns based on Variability

EPA should reconsider whether industry can realistically comply with the proposed standards for existing sources without significant investment.

- In the **EPA dataset**, 3 out of 15 proposed standards for existing sources (~20%), have test runs that exceed the applicable proposed limit.
 - In the **Combined dataset**, 8 out of the 15 proposed standards for existing sources (~53%), have test runs that exceed the applicable proposed limit.
- In a normal distribution, ~95% of the data is within two standard deviations of the mean. The standard deviation of each test event was calculated, then each individual test run result plus two times the standard deviation (2SD) was compared to the applicable proposed limit.
 - In the **EPA dataset**, 5 of the 15 proposed standards for existing sources had (run+2SD) values exceeding the applicable proposed limit (~33%); indicating potential compliance risks exist with the proposed limits.
 - In the **Combined dataset**, 10 of the 15 proposed standards for existing sources had (run+2SD) values exceeding the applicable proposed limit (~67%); further emphasizing potential compliance risks.

The following tables summarize the number of test runs in each dataset that exceed the proposed limits for existing sources by pollutant and process.

Test Runs Exceeding Proposed Limit			
<i>Pollutant</i>	<i>EPA Dataset</i>	<i>Additional Industry Data</i>	<i>Combined Dataset</i>
CS ₂	1	0	1
HCl	1	27	28
HF	1	0	1
THC	0	8	8
Total	3	35	38

Test Runs Exceeding Proposed Limit			
<i>Process</i>	<i>EPA Dataset</i>	<i>Additional Industry Data</i>	<i>Combined Dataset</i>
Sinter Plants	3	0	3
Blast furnace (BF) casthouse control devices (BFCHCD)	0	12	12
Basic oxygen process furnace (BOPF)	0	4	4
Blast furnace (BF) stove	0	19	19
Total	3	35	38

Tests Below Detection Limits

EPA should remove three proposed HAP limits because most of test runs in the EPA dataset were below detection limit (BDL) indicating the pollutant is not emitted in measurable quantities from these processes.

Test Runs Flagged BDL				
Process	Pollutant	Runs BDL	Total Runs	% Runs BDL
Sinter Plants	CS ₂	5	6	83
Sinter Plants	HF	13	14	93
Blast furnace (BF) stove	D/F TEQ	5	6	83

Revised UPLs calculated using Combined dataset

Recalculating the UPLs using the larger and more representative **Combined dataset** would increase the likelihood, but does not guarantee, that facilities could comply with the standards for existing sources without significant additional investment. However, industry still believes more appropriate standards should be developed from a dataset which reflects the majority of the existing operational emission units in each subcategory, with multiple stack tests performed in different seasons on each emission unit. This would help ensure the dataset includes the top performing emission units and that more sources of variability are represented.

[A]					[B]		[B] / [A]		(((B) / [A]) x 100%
Process	HAP	Basis for MACT Limit [1]	EPA Proposed MACT Limit Number of Stack Tests	EPA Proposed MACT Limit (for Existing Sources)	Revised UPL Number of Stack Tests	Revised UPL (for Existing Sources)	Units	Ratio of "Revised UPL" to "EPA Proposed MACT Limit" [2]	Revised UPL, as percent of EPA Proposed MACT Limit [3]
Sinter Plants	CS ₂	3xRDL ^a	2	2.80E-02	2	4.86E-02	lb/ton sinter	1.7	174%
Sinter Plants	HF	3xRDL ^a	2	1.10E-03	2	1.50E-03	lb/ton sinter	1.4	136%
BF CH-CD	HCl	UPL	2	1.30E-03	6	2.51E-02	lb/ton iron	19.3	1928%
BF CH-CD	THC	UPL	2	9.20E-02	5	4.32E-01	lb/ton iron	4.7	469%
BOPF	HCl	UPL	2	7.80E-02	6	1.97E+00	lb/ton steel	25.2	2523%
BOPF	THC	UPL	2	4.00E-02	9	2.99E-01	lb/ton steel	7.5	748%
BF Stove	HCl	UPL	3	5.20E-04	9	2.37E-03	lb/ton iron	4.6	457%
BF Stove	THC	UPL	3	1.00E-01	9	2.63E-01	lb/ton iron	2.6	263%

Surrogates

EPA should consider whether surrogates could provide similar protection with lower compliance costs.

- EPA has not demonstrated that the proposed THC limit correlates with any necessary limit for any specific organic HAP pollutant(s).

- EPA does not need to establish sinter/recycling plant D/F TEQ, PAH, COS, and CS₂ limits because an appropriate surrogate is already in place (VOC emissions CEM or sinter plant feedstock oil content).
- Surrogates for HCl and HF should be investigated further for this industry. For instance, scrubber pH and other particular design elements (emissions controls) and associated parametric monitoring data may provide direct correlation to acid gas emissions and remove the need for separate acid gas limits.

CONCLUSION

The following reasonable and technically achievable changes are needed to the Iron and Steel Rule:

- Do not finalize EPA's limits as proposed for D/F, PAH, COS, and CS₂ emissions from sintering/recycling plants. Instead rely on existing EPA VOC and oil limits, as well as scrubber pH as appropriate surrogates for HCl and HF as allowed in the MACT regulations.
- Do not finalize the following EPA proposed limits because emissions are BDL for applicable stack test methods: D/F emissions from BF stoves and BOPF primary control devices and CS₂ and HF emissions from sinter/recycling plants. EPA is not required to set limits for pollutants that are not detectable.
- Adjust the HAP limits identified in the Table in section titled 'Revised UPLs calculated using Combined dataset' that are based on new data submitted to EPA during the comment period to accommodate expected variability as demonstrated by a more representative dataset.
- Because there is limited data, EPA must add a mechanism in the final rule allowing facilities to request approval for alternative emission limits or alternative operating limitations for the sources with emission limits that the facility demonstrates cannot be achieved.
- Change the effective date of the rule from 6-months/1-year to 3 years.