Steel Founders' Society of America

EHS Regulatory Update

Skip & Martha Guimond
Joseph A. Guimond & Associates

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I. Minimum and Maximum Penalty Amounts.

Table 1 summarizes the minimum and maximum amounts for proposed civil penalties:

Table 1: Maximum and Minimum Amounts for Civil Penalties

Type of Violation	Penalty Minimum	Penalty Maximum
Serious	$1,116 per violation	$15,625 per violation
Other-Than-Serious	$0 per violation	$15,625 per violation
Willful or Repeated	$11,162* per violation	$156,259 per violation
Posting Requirements	$0 per violation	$15,625 per violation
Failure to Abate	N/A	$15,625 per day unabated beyond the abatement date [genera

II. * For a repeated other-than-serious violation that otherwise would have no initialpenalty, a GBP penalty of $446 shall be proposed for the first repeated violation,$1,116 for the second repeated violation, and $2,232 for a third repetition.

III. Gravity Based Penalty Amounts.

The gravity of a violation is defined by the Gravity Based Penalty (GBP).

- A **high gravity** violation is one with a GBP of $15,625.
- A **moderate gravity** violation is one with the GBP ranging from $8,929 to $13,394.
- A **low gravity** violation is one with a GBP of $6,696.

U.S. Department of Labor June 20, 2023

Ohio manufacturer faces $171K in penalties after worker suffers amputation while operating machine that lacked adequate safety protections. Quality Castings **had near miss incident on same machine 8 months earlier**

XXXXXX, OH – When federal investigators responded to a report that a mold machine operator at an Ohio foundry **suffered a right thumb amputation in February 2023, they learned the company took no corrective action despite knowing that an employee using the same machine avoided similar injury eight months earlier.** The U.S. Department of Labor's Occupational Safety and Health Administration found XXXXX Castings Company in XXXXX **failed to lockout the core mold machine's operating parts during service and maintenance.** The lack of protection allowed the operator's hand to become caught by the rotating mold as they adjusted the machine's flame. The company also **failed to guard the machine and did not train workers on safety procedures as required.**

Risks Ignored: XXXX faces $545K in new penalties after 14th worker in 6 years suffers injuries at XXX vinyl manufacturing plant

US subsidiary of global company cited for workplace safety failures in 2017, 2020, 2022

XXXXX, OH – An Ohio-based vinyl tile manufacturer with a history of failing to protect workers from hazards at its XXXX plant dating back to 2017, **now faces an additional $545,853 in federal penalties after investigations by the U.S. Department of Labor.**

The department's Occupational Safety and Health Administration opened an inspection at XXX, following a report of a finger amputation in February 2023. Investigators learned a 56-year-old machine operator **suffered the injury when their gloved finger became caught** in a chain and sprocket system that didn't have required safety guards in place.

After the March inspection and a required follow-up in May 2023 stemming from a prior inspection, OSHA cited the company for three willful violations, two repeat violation, three serious and two other-than-serious violations for exposing workers to machine hazards by failing to employ adequate lockout and tagout procedures, train workers properly and guard machinery as required by law.

OSHA cited the company for similar violations in October 2022 and proposed $1.2 million in penalties, a finding currently being contested by XXXXX. Fourteen workers at the plant have suffered injuries, including numerous cases of severe amputations since 2017, the same year OSHA added the Fostoria plant to its Severe Violator Enforcement Program

Federal investigators find XXXX Airlines failed to follow required safety procedures to protect ground crew member from suffering fatal injuries

Safety failures exposed workers to engine ingestion, jet blast hazards

XXX, AL – Had XXX Airlines made sure that a ground crew followed required safety procedures, a 34-year-old customer service agent might have avoided **suffering fatal injuries after being pulled into the spinning turbines of a jet engine** in December 2022 at Montgomery Regional Airport.

An investigation into the New Year's Eve fatality by the U.S. Department of Labor's Occupational Safety and Health Administration determined that, as the wing walker on a ground crew placed cones around an Embraer E75 passenger plane, suction near one of the plane's engines pulled her inward.

"**Proper training and enforcement of safety procedures** could have prevented this tragedy," said OSHA Area Director Jose A. Gonzalez in Mobile, Alabama. "This incident is a tragic reminder that safety measures must be in place even for a routine assignment."

OSHA issued XXX Airlines a citation for one serious violation for exposing ground crew workers to ingestion hazards while performing aircraft marshalling, wing-walking and baggagehandling tasks. The airline **faces $15,625 in proposed penalties**, an amount set by federal statute….

The company has contested the findings before the independent Occupational Safety and Health Review Commission.

Federal investigators find Ohio foundry's failure to follow required safety procedures led to fatal steam explosion

1 fatality, 15 injuries, and work site's complete loss

XXX, OH – A federal workplace safety investigation into a XXX foundry explosion that caused the **death of a maintenance supervisor and injuries to 15 other employees** found the operator, XXX, failed to protect workers from **the hazard of steam explosions**.

Inspectors with the U.S. Department of Labor's Occupational Safety and Health Administration learned the explosion happened while employees inspected a water leak on a furnace used to smelt solid metals. OSHA determined water leaked onto the molten metal inside the furnace, causing a steam explosion. Inspectors found the **company did not make sure that required lockout/tag out procedures were followed during the inspection** of the furnace…..

OSHA cited the company for six serious violations and has **proposed $62,500 in penalties**. The foundry remains closed since the explosion.

Based in XXX since 1917, XXX. today recycles material into metal alloys, ingots and pellets.

Why the Difference?

Hazard Communication			
Institutions ensure there is an efficient and effective higher degree by research (HDR) governance framework, which assures and enhances research training quality and reports against internal and external reference points.			
Written Program			
Written Program including personnel responsible, required documents, annual update	Is the Written Program complete and current	Written program available but needs updating as to personnel responsible	**Needs updating immediately**
Training			
All employees must be trained in the elements of the Hazard Communication Program and show evidence they understand the program and the hazards of all chemicals that are in the workplace that may affect them	Are current employees trained and new employees trained with evidence that they understand the program	E,ployees are trained.. Evaluation of employee understanding is not available	**Moderate importance. Method for evaluation of employee understanding should be developed**
Safety Data Sheets (SDS) and Labels			
SDS must be available and chemicals properly labeled including GHS symbols	Are up to date SDS available for management and employees	SDS are available. System to undsure they are updated needs development	**Low importance.**
	Are chemicals properly labeled including GHS symbols	Most chemicals lablelled. Review of labels needed	
LocK Out Tag Out			
Written Program			
A Written Program is required including individual Lock Out procedures, required annual certification	Is the Written Program complete and current	Written lock out procedures are available but need some modification to meet OSHA requirements	**Needs updating immediately**
	Are annual certifications up to date	Lock Out certifications are not conducted	**Needs updating immediately**
Training			
All employees must be trained in the elements of the Lock Out Program (both authorized and affected workers) and show evidence they understand the program and the hazards of use of equipment	Are current employees trained and new employees trained with evidence that they understand the program	Emloyees are trained.. Evaluation of employee understanding is evidenced through annual certification	**Needs immediate development of certification program**

Written Program

A Written Program is required including analysis of potential confined spaces to determine classification and hazards	Is the Written Program complete and current	Written program and determinations of confined spaces are not complete	**Needs moderate updating**
Training			
All employees must be trained in the elements of the Program and show evidence they understand the program and the hazards of confined spaces.	Are current employees trained and new employees trained with evidence that they understand the program	Employees are trained.. Evaluation of employee understanding is evidenced through following the program for both permit and non permit confined space entry	**Needs moderate attention based upon limited confined spaces at the facility**
Signs			
Signs are required for both permit and non permit confined spaces	Are signs posted for both permit and non permit confined spaces	There are no signs posted	**Needs attention for confined spaces**
Personal Protective Equipment			
Written Program			
A Written Program is required including written evaluation of occupations, hazards, and equipment required	Is the Written Program complete and current	Written occupation evaluation, hazards, and equipment evaluations are available but require review for completeness	**Needs updating immediately**
	Is required certifications up to date	Certifications statement required	**Needs updating immediately**
Training			
All employees must be trained in the PPE Program for the equipment required for his/her occupation	Are current employees trained and new employees trained with evidence that they understand the program	Emloyees are trained.. Evaluation of employee understanding is evidenced through proper use of equipment. However, enforcement of use requires additional attention	**Needs immediate attention to enforcement**

Respiratory Protective Equipment			
Written Program			
A Written Respirator Program is required for all employees required to wear a respirator and those who voluntarily chose to wear a respirator. Those employees who voluntarily chose to wear a dust mask are exempt from this program. **All employees exposed to airborne chemicals above the Permissible Exposure Limit must be included in this program**	Is the Written Program complete and current	Written program is not available. Program is required based upon current respirable silica test results	**Needs updating immediately**
Training			
All employees must be trained in the Repiratory Protection Program for the equipment required for his/her occupation	Are current employees trained and new employees trained with evidence that they understand the program	Emloyees are trained.. Evaluation of employee understanding is evidenced through proper use of equipment. However, enforcement of use requires additional attention	**No action required at this time**
Fit Testing			
All employees in the program must be fit tested annually	Are current employees fit tested annually	Emloyees are currently not fit tested	**Immediate attention to fit testing requirement is needed**
Medical Surveillance			
All employees in the program must complete the required survey form	Have employees in the program completed the required medical survey	Emloyees are currently not fit tested	**Immediate attention to fit testing requirement is needed**
Completed forms must be evaluated by a medical professional to determine if any further testing is required	Have forms been evaluated by a medical professional to determine if any further testing is required and ha follow up medical work been completed	Employees have not completed the required form and follow testnig has not been initiated or completed	**Immediate attention required**

Respirable Silica Program			
Written Program			
A Written Silica Exposure Control Plan is required for all persons in occupations that may be exposed to respirable silica above the Action Level of 25 ug/m3 (exposure must include any worker who would be exposed if engineering or work place conrrols were NOT in place)	Are Silica Exposure Control Plans complete and current	Written Silica Exposure Control Plans are in place for some occupations. Plans need to be completed for all such potential exposures	**Needs updating immediately**
Training			
All employees must be trained in the standard and hazards as part of the Hazard Communication Program	Are current employees trained and new employees trained with evidence that they understand the program	Emloyees are trained. Evaluation of employee understanding is evidenced through proper use of equipment. However, enforcement of use requires additional attention	**No action required at this time**
Fit Testing - covered by Respirator Program			
Medical Surveillance			
All employees exposed above the Permissible Exposure Limit must evaluated by a medical professional	Have employees in the program bee evaluated by a medical professional	Emloyees above the PEL have not been medically evaluated	**Immediate attention is needed**
All employees exposed above the Action Level but below Permissible Exposure Limit must evaluated by a medical professional by JUNE 23, 2020	Action not required until June 2020	Action not required until June 2020	**Action not required until June 2020**
Engineering or other Controls			
Engineering or other control measures must be undertaken to reduce expousre where tests have shown respirable silica exposure is above the PEL	Have engineering or other control measures been developed to reduce exposures above the PEL Have engineering or other control measures been developed to reduce exposures above the PEL	Egineering or other control measures are being developed to reduce exposures above the PEL. Exposure levels have been reduced throughout the facility with only one occupation currently identified as above the PEL Restricted areas not posted	**A written engineering conrol program (measures to reduce exposure/ abatement period required immediately) and restricted areas must be POSTED**

Hearing Conservation Program			
Have Restriceted Access areas been identified and signs posted			
A Written Hearing Conservation Program is required for all persons in occupations that may be exposed to noise levels above the 85 dB eight-hour time weighted average. This is based upon the noise survey that must be conducted by the employer.	Is a written Hearing Conservation Program in place? Has the required Noise Survey been completed?	a written Hearing Conservation Program is in place but needs to be revised to include conditions and requirements specific to the foundry A Noise Survey for the facility has not been found	**Needs updating immediately**
Training			
All employees must be trained in the standard and hazards annually	Are current employees trained and new employees trained with evidence that they understand the program	Emloyees are trained. Evaluation of employee understanding is evidenced through proper use of equipment. However, enforcement of use requires additional attention	**No action required at this time**
Medical Surveillance			
All employees exposed above the 85 dbA limit must be offered audiometric testing annually	Have employees in the program been offered required audiometric tests that are evaluated by a medical professional	Emloyees have been offered tests that are evaluated by medical professional personnel	**No action required at this time**
Engineering or other Controls			
Engineering or other control measures must be undertaken to reduce expousre where tests have shown noise levels at or above 100 dbA for an 8 hourtime weighted average (or above 115 dbA at any time)	Have engineering or other control measures been developed to reduce exposures aas required	Engineering or other control measures required can not yet be identified based upon the need for a noise survey. The majority of operations appear to be below the 100 dbA limit, but this needs verification	**Moderate attention based upon use of hearing protection, audiometric testing, and noise levels historic for this industry**

Electrical Control Boxes				
Electrical Control Boxes must be labelled with manufacturer of box	Are Electrical Control Boxes labelled with manufacturer of box		Yes	**No action required at this time**
Electrical Control Boxes must be labelled with Voltage	Are Electrical Control Boxes labelled with Voltage		Not all boxes are labelled with voltage	**Immediate attention is needed**
Electrical Control Boxes must be labelled as to equipment controlled	Are Electrical Control Boxes labelled as to equipment controlled		Not all boxes are labelled with equipment controlled	**Immediate attention is needed**
Cranes and Slings				
Cranes and steel alloy slings must be tested annually by authorized personnel	Are Cranes and steel alloy slings tested annually by authorized personnel			
Cranes and steel alloy slings must be inspected monthly with records maintained	Are Cranes and steel alloy slings inspected monthly with records maintained			
Cranes and steel alloy slings must be inspected daily	Are Cranes and steel alloy slings inspected daily or at first use of the day			
Fire Extinguisgers				
All fire extinguishers must be tested annually by authorized personnel	Are fire extinguishers tested annually by authorized personnel		Yes	**No action required at this time**
All fire extinguishers must be inspected monthly with records maintained	Are fire extinguishers inspected monthly with records maintained		Yes	**No action required at this time**

Components	Questions	Rating	Evidence	Recommendations	
				Essential	Person(s) or unit, responsible (delegated responsibility)
IRON & STEEL FOUNDRY Area MACT Subpart ZZZZZ (5Z)					
Applicable to ALL Iron & Steel Foundries. Large Foundry is >20,000 TPY or (new facility >10,000 TPY); Small Foundry 20,000 TPY or less.					
Written Programs					
Written Pollution Prevention Management Practices program for for metallic scrap is required for all iron and steel foundries.	Restricted Metallic Scrap or General Iron & Steel Scrap. Program to implement appropriate controls for the type of scrap purchased.				
Written Materials Specifications for all types of scrap purchases.	Need copies of all specifications and a method to demonstrate transmittal to the vendors.				
Material Specification for Furfuryl Alcohol Warm Box core or mold making.	Contain no methanol in the CATAYLST. SDS or Technical Data sheet must confirm.				
LARGE FOUNDRY ONLY: Written Operation & Maintenance Manual for each control device. Maintain mainteance logbook.	Must employ control equipment for each melting furnace with special particulate standards. Specific maintenance tasks are required.				
Training					
Standard does not include specific training requirements.	Are current employees instructed and trained to ensure standard's requirements are achieved?				
Record Keeping					
Semi-Annual Compliance Reports	Reports go to both EPA and state agency. 5-year record retention.				
Initial Notification Ltr, current and past Written Material Specifications, correspondance with vendors on specs, records of melt production, performance test reports (if applicable).	Copy of notification must be available regardless of date transmitted.				
IF YOU USE SCRAP OTHER THAN RESTRICTED METALLIC SCRAP OR SPECIALTY METAL SCRAP: You must have a site specific Mercury Program which is beyond the scope of this format and is unusual for foundries.	*The details of a Mercury Program are too extensive for this chart. It is assumed that few, if any, will chose this method of compliance.*				
Performance Testing					
FOR LARGE FOUNDRY ONLY. Initial particulate and opacity testing require in first 180 days. Must restest every 5-years. Test only collectors exhausting melting furnaces.	Be certai n to comply with your state's specific testing protocols including pre-test written protocol, notifications, etc.				

Reciprocating Internal Combustion Engines (RICE) Area MACT Subpart ZZZZ (4Z)					
Written Programs					
A Written Maintenance Program is required. May be a copy of the manufactruer's maintenance recommendations with your name added. Must include specific maintenance procedures contained in the standard such as oil changes, etc.	When using vendor supplied maintenance ensure that they comply with the ZZZZ maintenance requirements and provide you with a full copy.				
Special Requirements					
Must have a Non-Resettable hour meter installed. Must record all operations and designate type of operation (emergency, maintenance, routine test run, etc)	You must log each operating period of the RICE motor including if it was foe emergency power, mainteance, or routine periodic operation.				
Special rules are required for motors greater than 500 HP.	Testing Required				
Record Keeping					
Record all engine operations and type of operation. Record maintenance performed.					
No notification to EPA or State if RICE motor <100 HP or is not subject to numerical emission standards.					
None for non-major sources of HAPs. None if no emission limits are published. Check the standard for special CI and SI requirements.					

Calciners and Dryers in Mineral Industries (NSPS Part 60, Subpart UUU)

A subpart with a confusing and uncertain enforcement history

History of the Subpart

1992 -- Subpart is Published

2000 -- EPA Rules that Foundries are affected (Foundries were not in the affected SIC code list)

2003 -- AFS requests clarification

2004 -- EPA confirms foundries are affected

2008 -- EPA proposes to exempt foundries

2009 -- EPA decides to take no further action

Current enforcement is spotty for existing Thermal Sand Reclaimers. New units are 90+% covered under UUU.

2010 -- EPA Region V enforcement begins

Decisions regarding existing non-compliant reclaimers are at the least complex

Record Keeping					
Semi-Annual Compliance Reports are required	Reports go to both EPA and state agency. 5-year record retention.				
Maintenance recordkeeping is required fot all controls.					
Performance Testing					
Initial stack test (EPA Method 5) and opacity test (EPA Method 9) is required within first 180 days.	Only an initial test within 180 days is required. Be certai n to comply with your state's specific testing protocols including pre-test written protocol, notifications, etc.				
Subpart requires the installation and maintenance of a Continuous Emission Monitor (CEM).	In most states a alternative plan for daily EPA Method 22 visual inspections can be used in lieu of the CEM. Daily observations and reports will be required.				
Subpart allows a maximum outlet particulate concentration of 0.04 gr/dscf.	Most states require far lower PM emissions and the state's lower requirement will prevail.				

Industrial, Commercial, and Institutional Boilers (MACT Part 63 Subpart JJJJJJ) Gas Fired Boilers are Exempt from the subpart (many facilities have switched fuels). Residential boilers are also exempt.					
You are subject to JJJJJJ if you own or operate an industrial, commercial, or institutional boiler and are an Area Source (not Title V). A Large Boiler is >10 mmbtuh, all others are Small Boilers. Existing Boiler began construction on or before 6/4/2010. All others are New Boilers.					
Subpart Requires for Small Boilers: Initial Notification of Applicability Tune-Up Every 2 years (Rpt prepared NLT 3/1 of following year) Report must be submitted ONLY if requested	Reports must be sebmitted online, including tune-up info.				
Subpart requires far more detail and Reports for Large Boilers depending on numerous variables including fuel and hours. See the actual rule and/or contact SFSA for further assistance.	Many foundries have converted to natural gas fuel to eliminate compliance with this sub-part.				

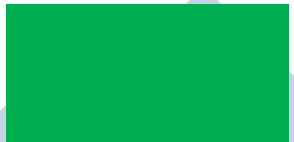
NOTES:

1. A copy of each applicable MACT or NSPS Standard should be maintaind onsite in a special folder.
2. The standards in question can be confusing and difficult to read. Be certain to read each standard in its entirety.

Legend:

Not in compliance, Needs Immediate Attention

Not in full compliance. Acooect as soon as practical.



In compliance

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OSHA ISSUES

- The majority of inspections are from complaints or hospitalizations
- NOISE is an issue –mostly sampling and determining noise levels
- Lock out is a major concern
- Medical Surveillance and training are major issues
- Guarding is always a concern
- Response to formal and informal complaints are critical

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STORMWATER Permits and Sampling

- Most states are requiring periodic stormwater sampling and at least annual inspections of stormwater discharges
- Many municipalities are also monitoring stormwater discharges since they affect their municipal permits

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WASTE

- While we see no new pushes on Hazardous waste regulations on the federal level, the tracking of waste on the internet has meant close monitoring of waste production and disposal
- Emphasis on training and programs continues
- There is more interest in Universal Waste Programs and proper handling and disposal of universal waste
- Control of residual waste continues to be on the state or local level with more concern with NORM

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PROPOSED $PM_{2.5}$ NAAQS

- EPA will soon propose a 17 – 25 % reduction in the existing $PM_{2.5}$ NAAQS of 12 ug/m^3.
- As a PSD program many assume it applies ONLY to Major Sources (Title V Permits).
  - Each state will need to comply with the NAAQS, often by reducing the allowable PM emissions.
  - Minimum 18-month period for implementation but expect new emission standards much sooner.
  - Determine if your facility is in an Attainment or a Non-Attainment area for all NAAQS pollutants (PM_{10}, $PM_{2.5}$, Ozone, CO, SO_2,NO_2, and Lead).

Proposed $PM_{2.5}$ NAAQS

What Should You Do?

1. Determine if you are in an Attainment or Non-Attainment Area for $PM_{2.5}$ and all other NAAQS.
2. Avoid locating in any non-attainment area if possible.
3. Also avoid locating in an EPA/State Environmental Justice Area if possible. While normally limited to large metropolitan areas EJ locations can make permitting far more difficult both now and in the future.
4. When purchasing a new fabric collector insist on a written guarantee with a maximum emission rate of PM_{10} of less than 0.005 gr/dscf.

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Proposed Rule for Federal Contractors on GHG Emissions

The Administration's latest attempt to shift away from carbon-intensive energy sources.

1. A complex rule that appears to only affect large government contractors.
2. A contractor's supply chain may be included to also require burdensome reporting requirements for sub-contractors (read "foundry").
3. Rule should not involve capital spending, but the paperwork burden could be substantial and costly.

If you need assistance with GHG calculations SFSA will be available to assist you—just let us know.

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Foundry Focus on MACT & NSPS

- *FLASH! You are an active target. MACT/NSPS has been around for years—but enforced NOW!*.
- The regulations, or subparts, are typical, complex and sometime difficult to interpret.
- Why the current push on enforcement???
  1. EPA pressure on the states to enforce.
  2. Easy to enforce since most requirements must be supported with paperwork
  3. You self convict when there is no record

SFSA has prepared a simple checklist as a management tool to verify compliance.

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INSPECTION CHECKLIST

1. Write down the name and title of each inspector.
2. Note the agency, which office, cards if possible.
3. Time they Arrived.
4. Why they are here? (need to ask)
5. What do they want to see (limit to reason here)
6. Time they entered workplace, if they do.
7. What they observed (SO, Molding, Pouring, etc)
8. Time they left the work area.
9. What written records they observed and/or requested a copy of.

Checklist - Continued

10. Photographs/videos they took.
11. Any comments, suggestions, or possible violations they mention
12. Ask what comes next (Report, NOV, testing, etc.)

- Inspectors must wear appropriate PPE
- Never leave an inspector alone, if there are 2 then keep them together.
- If you do DoD work, be certain the inspectors follow all restrictions including photographs.

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Contact Information

Guimond & Associates

E-Mail

Skip Guimond – jguimondjr@guimondassoc.com

Martha Guimond – Maramond@aol.com

SFSA Member Hotline

(215) 721-4500