

EPA PROPOSES COLLECTION OF INFORMATION FOR “KILN MACT”

By Nash Skipper, EIT

The US Environmental Protection Agency (EPA) has proposed to issue an Information Collection Request (ICR) for the Plywood and Composite Wood Products (PCWP) National Emission Standards for Hazardous Air Pollutants (NESHAP), also known as the “Kiln MACT”. This is an important update for those in the lumber industry, as lumber drying kilns are one of the sources regulated under the standard. While the PCWP NESHAP covers many types of process units, this discussion will be primarily focused on the standard’s effect on sawmills operating lumber drying kilns.

What is the history of the rule?

The standards were originally put into effect by the EPA in 2004 and contained minimal requirements for operators of lumber kilns. Environmental groups challenged several portions of the rule, including the fact that the EPA did not establish emission standards for certain types of emission units (including lumber kilns). The DC Circuit Court of Appeals ruled in favor of the environmental groups and issued a remand, requiring the EPA to develop emission standards for emission unit subcategories for which no emission standards had been previously established.

What is the timeline going forward?

The EPA issued a draft ICR for review and comment, with comments due by November 7, 2016. Next, the EPA will send out a survey to all PCWP facilities that are major sources of Hazardous Air Pollutants (HAPs) and those that have permitted limits to keep HAP emissions under major source thresholds (10 tons per year of a single HAP or 25 tons per year of all HAPs combined). The EPA has stated that it is intending to allow 90 days for facilities to complete the survey. Once all information has been collected, the EPA will develop emission standards. For lumber kilns, it appears that these new emission standards will not contain numeric emission limits, instead they will be work practice standards only.

What information will be requested?

A draft version of the ICR survey is available online in the public docket for the ICR. The survey requests information on the following topics which may be applicable to sawmills with lumber kilns:

- General information about the facility, products, and PCWP equipment;
- Current emission limits contained in operating permits;
- Design and operational characteristics of each lumber kiln (e.g. starting and target moisture content, drying temperature, drying cycle schedules);
- Fuel combusted for direct-fired kilns;

- Sanders, saws, and chippers;
- Process wastewater;
- Emissions and emission calculation methodologies for HAPs from kilns;
- Emission testing data (if available).

What will the work practice standards be?

The goal of the work practice standards will be to minimize HAP emissions. For lumber kilns, HAP emissions depend on the percent reduction in moisture content and the drying temperature inside the kiln. It is likely that any work practice standards developed by the EPA will address these parameters. Industry groups have suggested that each affected mill should be allowed to develop its own site-specific plan for work practices which is tailored to each mill’s operations. However, some state permitting authorities have started to include specific kiln work practice schedules within air permits. The exact approach taken by the EPA remains to be seen.

What are the main takeaways for operators of lumber kilns?

The EPA will be sending out a survey to affected facilities in the near future. The information required in the survey will be extensive; the EPA has estimated that it will take an average of 250 hours per PCWP facility to complete the surveys. The EPA will review the responses to the surveys and use the data in establishing MACT standards for lumber kilns. It is likely that the MACT standards will be in the form of work practice standards. Once standards are developed, facilities will have to comply by establishing work practices, keeping records, and submitting compliance reports.

CTI has experience working with operators of lumber kilns to satisfy their environmental requirements. Please contact CTI if you are in need of assistance to complete your ICR survey or to comply with the Kiln MACT standards when they are issued.



RISK ASSESSMENT METHODOLOGY FOR ROBOTS AND OTHER MACHINES

By Adam Haroz, EIT



Assessing risk has always played a vital role in the development and implementation of industrial machinery. Industrial robots, in particular, and other machinery are evolving, and therefore so are the needs and regulatory requirements for the identification and understanding of the risks involved in working with these machines. Thanks to the passage and enforcement of regulations governing the use of industrial machinery by organizations such as the Robotic Industry Association (RIA), Occupational Safety and Health Administration (OSHA), the American National Standards Institute (ANSI), and the International Organization for Standards (ISO), conducting risk assessments on robotic systems and other machinery are not just good practices, they are mandatory.

According to OSHA, machine guarding (29 CFR 1910.212) is often on OSHA's top 10 most frequently cited standards. Even though machine guarding is only one aspect of the risk assessment, it is usually the starting point for internal risk assessments to be conducted. While OSHA does have several regulatory standards covering machine safeguarding and risk assessment requirements, they typically rely on national consensus standards for more in-depth requirements for conducting risk assessments, and much more. These ANSI consensus standards outline the requirements for hazard identification for robots and other machinery.

Each piece of machinery and process has its own set of particular challenges and risks. Risk could be interpreted differently between similar pieces of equipment and processes depending on the exposure of employees, position of the equipment within the process line, even the equipment's location within a facility. Understanding and assessing the risks of robots and other machinery is not an easy task. Taking into consideration the ever changing regulations covering these pieces of equipment, employee exposure to hazards, and the requirements of risk assessments themselves opens the door to interpretation and confusion. Therefore, as technology, industry, and regulation changes and improves, there is an apparent shift in the need for a more quantitative approach to assessing risk, as compared to qualitative risk assessments which could be interpreted differently from one day to the next.

For this reason, Conversion Technology Inc. (CTI) has developed a risk assessment methodology that is easy to use and can be implemented for each piece of machinery, including robots and Computer Numeric Control (CNC) machine. This risk assessment methodology is referred to as the APH Risk Assessment, named after the developers of the method, Adam and PH Haroz, from CTI.

The APH Risk Assessment methodology takes a quantitative approach by assigning numeric values to different aspects of hazards and risks like the likelihood that the hazard is to be present during the task or operation and how often the employee is exposed to the hazard. The APH Risk Assessment allows for an objective and pragmatic appraisal of the hazards and associated risks of a robot or piece of machinery. It also allows for a simple method for prioritizing the abatement schedule of the identified risks and hazards. With the numeric values designated for the different hazards and risks for the multitude of tasks and operations of machinery, we can calculate the Risk Level for each observed hazard using CTI's formulation. Based on the Risk Level calculated, an associated Risk Rating (from low risk to unacceptable risk), Action Priority, and recommendations for improvement is provided.

By assigning numerical values to the risks, we are able to separate those risks and hazards that can be easily abated through safeguarding from those that may require changing administrative or engineering practices. Once recommendations are provided, a new Risk Level is calculated for the observations after the recommended safeguards are in place and administrative and engineering practices are implemented. The APH Risk Assessment Rating and Priority result table is as follows:

Risk Rating	Action Priority
Low	Safeguard installation and/or administrative practices can be reviewed or updated at the facility's discretion.
Moderate	Safeguard installation and/or administrative practices should be addressed at the earliest convenience.
High	Safeguard installation action and/or administrative practices should be given high priority.
Unacceptable	Action required immediately. The robot/CNC should not be operated until safeguards are installed and/or administrative practices are reviewed and a plan of action for abatement is determined.

Regardless of the equipment in a facility and the safety equipment installed on robotic systems and other machinery, a risk assessment needs to be conducted that identifies the hazards of the equipment to ensure the safety of employees and to maintain compliance with OSHA and ANSI consensus standards.

Contact CTI for more information on our quantitative risk assessment technique or to discuss conducting a complete machine risk assessment of your facility.

EPA ISSUES CHANGES TO RCRA HAZARDOUS WASTE GENERATOR RULE

By Nash Skipper, EIT

The US Environmental Protection Agency (EPA) has issued a final rule to revise the Resource Conservation and Recovery Act's (RCRA) hazardous waste generator regulatory program. The update contains over 60 revisions and will be effective May 30, 2017. One of the EPA's objectives of the revisions is to reorganize the regulations to make them more user-friendly and easier to understand for generators. The revisions also include changes that address gaps in existing regulations, provide more flexibility for generators to manage hazardous waste, and make technical corrections.

Below is a list of some of the program changes:

- The term for facilities that generate less than 220 pounds of hazardous waste in a month was changed from Conditionally Exempt Small Quantity Generators (CESQG) to Very Small Quantity Generators (VSQG).
- Hazardous waste generated from an episodic event does not count towards determining generator status. An episodic event is an activity that does not occur as part of normal operations. Examples of episodic events include tank cleanouts, removal of excess chemical inventory, and clean up in response to spills. Under the previous rule, an episodic event could cause a VSQG or SQG to be bumped up to LQG status if the event caused over 2,200 pounds of hazardous waste to be generated. There are notification and recordkeeping requirements that must be met by VSQGs and SQGs managing hazardous waste from an episodic event.
- SQGs must submit a notification of their generator status once every four years. This replaces the previous requirement of a one-time notification.
- Some marking and labeling requirements for hazardous waste containers have been updated.
- Some of the emergency response provisions for LQGs have been updated.
- VSQGs can send hazardous waste to LQGs that are under control of the same entity if certain conditions are met.
- Records of hazardous waste determinations must be kept for at least three years. Records of non-hazardous waste determinations are not required to be kept, but EPA does recommend that generators keep these records as a best management practice. It should be noted that some states have adopted more stringent regulations that do require records of non-hazardous waste determinations to be kept.

CTI has experience assisting facilities to identify and properly manage hazardous waste. Please contact CTI if you need assistance to determine how the updated hazardous waste rules might impact your hazardous waste management program.



News You Can Use

- GA Stormwater Smoke and Dye Testing Compliance Deadline, **May 31, 2017**
- SARA Tier II Reporting: Is your Facility Required to Report for the **March 1, 2017** deadline?
- ISO 45001 Timeline delayed
- Look on our website to find out more about CTI's Process Safety services

Look for more info for these stories on our news blog, conversiontechnology.com/blog



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- Combustible Dust Hazard Analysis
- Dust Sampling and Analysis
- Explosion Protection Design
- Hazardous Location Determination
- NFPA & OSHA Compliance Review

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- Confined Space Entry Procedures
- Job Hazard Analysis (JHA)
- Machine Guarding Risk Analysis
- Machine Specific Lockout/Tagout Procedures
- Noise Exposure Monitoring
- Occupational Air Exposure Monitoring
- OSHAS 18001 Consulting
- OSHA Compliance Audits and Mock OSHA Inspection
- OSHA Required Safety Training
- Safety Policies, Procedures and Programs