Grounds & Indoor Environmental Air Quality

- Stay away from isolated objects such as single trees or towers. If your hair stands on end or your skin tingles, lightning may be about to strike.
- Crouch down quickly and make yourself as small a target as possible.
- Minimize contact with the ground.

If driving in a motor vehicle:

Stay in your vehicle. An enclosed vehicle offers reasonably good protection from lightning as long as you don't touch metal.

Grounds Maintenance

Chainsaws

Purpose

Operating a chainsaw can be hazardous. Potential injuries can be minimized by using proper personal protective equipment and safe operating procedures.

Before Starting a Chainsaw:

- Check controls, chain tension, and all bolts and handles to ensure that they are functioning properly and that they are adjusted according to the manufacturer's instructions.
- Make sure that the chain is always sharp and that the oil tank is full.
- Start the saw on the ground or on another firm support. Drop starting is never allowed.
- Start the saw at least 10 feet from the fueling area, with the chain's brake engaged.

Fueling a Chainsaw:

- Use approved containers for transporting fuel to the saw.
- Dispense fuel at least 10 feet away from any sources of ignition when performing construction activities.

Managers and closely matches the recommendations contained in the eight steps described above. Answering these questions will help you determine whether you have taken all of the steps the EPA recommends to implement good IAQ management practices or whether additional actions should be taken to bring your building up to the level described in the guidance. As you address the issues discussed in the Checklist, keep records of your progress so you can refer to them later if questions or related issues arise.

Hazard Communication

Purpose

To inform all employees, by means of labels, Safety Data Sheets (SDS) and Training, of the physical and health hazards to which they may be exposed.

References

OSHA 29 CFR 1910.1200; 1926.59

OSHA has established a minimum number of chemicals, which are considered hazardous and are covered by the Standard. These are:

- Chemicals listed by OSHA in 29 CFR 1910, Subpart Z, Toxic and Hazardous Substances; and
- Chemicals listed by ACGIH in Threshold Limit Values for Chemical Substances and Physical Agents.

The National Toxicology Program's Annual Report on Carcinogens.

The International Agency on Research on Cancer's Monographs.

Policy

S.C. Swiderski, LLC as an employer engaged in a business where hazardous materials are either used or produced for use or distributed, or where its workers have the potential for contact with hazardous materials in their workplace, will ensure that the hazards of all materials found in the workplace will be evaluated, and that information concerning their hazard will be transmitted to all affected employees. Accordingly, this policy describes how these criteria will be met.

The Safety & Compliance Manager will be responsible for:

- No smoking during fueling.
- Use a funnel or a flexible hose when pouring fuel into the saw.
- Never attempt to fuel a running or HOT saw.

Chainsaw Safety:

- Clear away dirt, debris, small tree limbs and rocks from the saw's chain path. Look for nails, spikes, or other metal in the tree before cutting.
- Shut off the saw or engage its chain brake when carrying the saw on rough or uneven terrain.
- Keep your hands on the saw's handles and maintain balance while operating the saw.
- Proper personal protective equipment must be worn when operating the saw, which includes hand, foot, leg, eye, face, hearing, and head protection.
- Do not wear loose-fitting clothing.
- Be careful that the trunk or tree limbs will not bind against the saw.
- Watch for branches under tension; they may spring out when cut.
- Gasoline-powered chainsaws must be equipped with a protective device that minimizes chainsaw kickback.
- Be cautious of saw kickback. To avoid kickback, do not saw with the tip. Keep the tip guard in place.
- Always follow the manufacturer's recommendations for proper operation.

Mowers

Definitions:

Blade tip circle
The path described by the outermost point of the blade as it is rotated about its shaft axis.

Guards
A part or an assembly provided for shielding a hazardous area of a machine. Catcher assemblies. Parts or combinations of parts which provide a means for collecting grass clippings or debris.

Walk-behind mower
A mower is either pushed or self-propelled and is normally guided by the operator walking behind the unit. Operator area, walk-behind mowers. For discharge interference purposes, that area confined within a circle no smaller than 30 inches in diameter, the center of which is located to the rear of the mower on its longitudinal centerline 30 inches behind the nearest blade tip circle.

Power reel mower
A lawn-cutting machine utilizing a power source to rotate one or more helically formed blades about a horizontal axis to provide a shearing action with a stationary cutter bar or bed knife.

Power rotary mower
A lawn-cutting machine utilizing a power source to rotate one or more cutting blades about a vertical axis.

Lowest blade position
The lowest blade position under static conditions.

Riding mower
A powered, self-propelled lawn-cutting vehicle on which the operator rides and controls the machine.

Sulky type mower
Normally, a walk-behind mower which has been converted to a riding mower by the addition of a sulky.

Deadman control
A control designed so that it will automatically interrupt power to a drive when the operator's actuating force is removed.

General Requirements

Power lawn mowers of the walk-behind, riding-rotary types, and reel power lawnmowers designed for use by employees shall meet the design specifications in "*American National Standard Safety Specifications for Power Lawnmowers*" ANSI B71.1-1968. These specifications do not apply to sulky-type mowers, flail mowers, sickle-bar mowers, or mowers designed for commercial use. All power-driven chains, belts, and gears shall be so positioned or otherwise guarded to prevent the operator's accidental contact therewith, during normal starting, mounting, and operation of the machine.

A shutoff device shall be provided to stop the operation of the motor or engine. This device shall require manual and intentional reactivation to restart the motor or engine. All positions of the operating controls shall be clearly identified. The words, "Caution. Be sure the operating control is in neutral before starting the engine," or similar wording shall be clearly visible at an engine starting control point on self-propelled mowers.

Walk-behind and riding rotary mowers:

The mower blade shall be enclosed except on the bottom and the enclosure shall extend to or below the lowest cutting point of the blade in the lowest blade position.

Guards which must be removed to install a catcher assembly shall comply with the following:

Warning instructions shall be affixed to the mower near the opening stating that the mower shall not be used without either the catcher assembly or the guard in place. The catcher assembly or the guard shall be shipped and sold as part of the mower. The instruction manual shall state that the mower shall not be used without either the catcher assembly or the guard in place. The catcher assembly, when properly and completely installed, shall not create a condition that violates the limits given for the guarded opening.

Openings in the blade enclosure, intended for the discharge of grass, shall be limited to a maximum vertical angle of the opening of 30@. Measurements shall be taken from the lowest blade position. The total effective opening area of the grass discharge opening shall not exceed 1,000 square degrees on units having a width of cut less than 27 1/2 inches, or 2,000 square degrees on units having a width of cut 27 1/2 inches or over.

The word "caution" or stronger wording shall be placed on the mower at or near each discharge opening. Blade shall stop rotating from the manufacturer's specified maximum speed within 15 seconds after declutching or shutting off power. In a multi-piece blade, the means of fastening the cutting members to the body of the blade or disc shall be so designed that they will not become worn to a hazardous condition before the cutting members themselves are worn beyond use. The maximum tip speed of any blade shall be 19,000 feet per minute. Walk-behind rotary mowers: The horizontal angle of the opening in the blade enclosure, intended for the discharge of grass, shall not contact the operator area.

There shall be one of the following at all openings in the blade enclosure intended for the discharge of grass:

A minimum unobstructed horizontal distance of 3 inches from the end of the discharge chute to the blade tip circle.

A rigid bar fastened across the discharge opening, secured to prevent removal without the use of tools. The bottom of the bar shall be no higher than the bottom edge of the blade enclosure. The highest point on the front of the blade enclosure, except discharge openings, shall be such that any line extending a maximum of 15° downward from the horizontal toward the blade shaft axis (axes) shall not intersect the horizontal plane within the blade tip circle. The highest point on the blade enclosure front, except discharge-

openings, shall not exceed 1 and 1/4 inches above the lowest cutting point of the blade in the lowest blade position.

Mowers with a swing over handle are to be considered as having no front in the blade enclosure. The mower handle shall be fastened to the mower so as to prevent loss of control by unintentional uncoupling while in operation. A positive up stop or latch shall be provided for the mower handle in the normal operating position. The up-stop shall not be subject to unintentional disengagement during the normal operation of the mower. The up-stop or latch shall not allow the center or the handle grips to come closer than 17 inches horizontally behind the closest path of the mower blade unless manually disengaged. A swing-over handle, which complies with the above requirements, will be permitted. Wheel drive disengaging controls, except deadman controls, shall move opposite to the direction of the vehicle motion in order to disengage the drive. Deadman controls may operate in any direction to disengage the drive.

Riding Rotary Mowers

The highest point of all openings in the blade enclosure, the front shall be limited by a vertical angle of opening of 15@ and a maximum distance of 1 1/4 inches above the lowest cutting point of the blade in the lowest blade position. The opening shall be placed so that grass or debris will not discharge directly toward any part of an operator seated in a normal operating position.

There shall be one of the following at all openings in the blade enclosure intended for the discharge of grass: A minimum unobstructed horizontal distance of 6 inches from the end of the discharge chute to the blade tip circle. A rigid bar fastened across the discharge opening, secured to prevent removal without the use of tools. The bottom of the bar shall be no higher than the bottom edge of the blade enclosure.

Mowers shall be provided with stops to prevent jackknifing or locking of the steering mechanism. Vehicle stopping means shall be provided. Hand-operated wheel drive disengaging controls shall move opposite to the direction of vehicle motion in order to disengage the drive. Foot-operated wheel drive disengaging controls shall be depressed to disengage the drive. Deadman controls, both hand and foot-operated, may operate in any direction to disengage the drive.

Weed Trimmers

Purpose

An electric or battery powered grass trimmer can be great for maintaining a well-kept lawn, but there are some safety issues that users should bear in mind. Safety features are built into modern grass trimmers however, you still have to know how to operate the machine correctly and make sure to take all proper safety precautions.

Policy

Dress Appropriately
Summer is hot, so most people prefer wearing things like shorts and sandals when they go out to do yard work. Wearing protective clothing when operating an electric or battery powered weed trimmer. The string spins rapidly and can kick off a lot of debris. When you go to use a grass edge trimmer, wear long pants, footwear with a closed toe, gloves, and a long sleeve shirt to prevent getting scrapes.

Use Protective Equipment
In addition to wearing the right clothing while using an electric or battery powered string trimmer, you will also want to use the recommended protective gear. At a minimum, you must use eye protection, and earplugs. A face-shield and gloves are also recommended.

Check the Weather Before Using Your Grass Trimmer
You should avoid using an electric or battery powered weed trimmer in wet weather. To start, these conditions can put added stress on the motor, shortening the operating life of the grass trimmer. Furthermore, wet grass can be slippery, and it can be difficult to maintain your balance when holding and working with a tool on wet turf especially on inclines. A simple slip can result in injury, so it's better to wait for good weather before using your electric or battery powered grass trimmer if possible.

Clear the Area of Debris
The main safety concern when it comes to operating an electric or battery powered string trimmer is its potential to throw debris. To reduce this possible risk, you should walk the work area to look for any debris that could be easily thrown by the tool. You might not be able to find and remove everything, but you can limit the chances you'll be injured.

Be Careful of Bystanders as You Use the Grass Edge Trimmer
If and when possible, keep others out of your work area. The potential for every weed eater to throw scraps and other debris is high, and it can be a risk to the operator and any nearby person.

If you are around children or pets, ask them to go inside while you use the grass trimmer. If someone enters your work area, stop the tool and wait for them to leave before resuming your work.

Only Use Compatible Accessories
Every electric and battery powered grass trimmer is designed to work with string of a specific thickness. If you use string that is too thick or too thin, it can be hazardous. Check your manual and only use the recommended string for the grass trimmer you own. Most electric and battery powered weed trimmers are only designed to work with a cord, but there are some that can take an edging blade. However, you do not want to try to use a blade on a model that was not designed to take one.

Maintain the String Trimmer
Each time you take out your grass trimmer, you should give it a quick inspection to make sure all of the parts are still in good working order. When you are done using the machine, you should clean it thoroughly and put it away properly.

If you have a gas-powered trimmer, you want to make sure to store it, so the fuel does not leak. Additionally, you should avoid leaving gas-powered models in enclosed spaces with poor ventilation.

When used properly, string grass trimmers are very safe. You just need to wear the right protective clothing and gear and take some safety precautions to prevent injuries either to yourself or others. Always follow the manufacturers recommendations.

Indoor Environmental Air Quality

Purpose

The quality of indoor air inside homes, offices, and other workplaces is important not only for worker and tenants' comfort but also for their health. Poor indoor air quality (IAQ) has been tied to symptoms like headaches, fatigue, trouble concentrating, and irritation of the eyes, nose, throat, and lungs. Also, some specific diseases have been linked to specific air contaminants or indoor environments, like asthma with damp indoor environments. In addition, some exposures, such as asbestos and radon, do not cause immediate symptoms but can lead to cancer after many years.

Many factors affect IAQ. These factors include poor ventilation (lack of outside air), problems controlling temperature, high or low humidity, recent remodeling, and other activities in or near a building that can affect the fresh air coming into the building.

Sometimes, specific contaminants like dust from construction or renovation, mold, cleaning supplies, pesticides, or other airborne chemicals (including small amounts of chemicals released as a gas over time) may cause poor IAQ.

The right ventilation and building care can prevent and fix IAQ problems. Although OSHA does not have IAQ standards, it does have standards about ventilation and standards on some of the air contaminants that can be involved in IAQ problems. OSHA responds to questions about standards with letters of interpretation. OSHA's letters of interpretation specifically addressing IAQ issues can be found in Other Resources. The General Duty Clause of the OSH Act (the law that created OSHA) requires employers to provide workers with a safe workplace that does not have any known hazards that cause or are likely to cause death or serious injury.

Policy

Managing a building is a difficult and complex job. There are many competing demands safety and health, building maintenance, housekeeping, and communications with occupants and tenants. Building owners and managers are under pressure to maintain quality environments while managing costs. Such fiscal pressures can easily draw attention and resources away from important elements of building management such as indoor air quality (IAQ).

S.C. Swiderski and its Affiliates recognizes the importance of healthy, comfortable, and productive indoor environments, its awareness and demand for good IAQ increases. People spend about 90 percent of their time indoors and air within homes and other buildings can be more polluted than the outside air. U.S. Environmental Protection Agency (EPA) studies that compare risks of environmental threats to public health consistently rank indoor air pollution among the top five.

Maintaining a healthy and comfortable indoor environment in any building requires integrating many components of a complex system. Indoor air problems are preventable and solvable and practical guidance on how to manage your building for good indoor air quality is available.

To promote the use of these straightforward practices to improve IAQ, EPA and other leaders in the IAQ field developed this 8-step *Building Air Quality – Action Plan.* This additional resource meets the needs of building owners and managers who want an easy-to-understand path for maintaining their buildings with the successful institutionalization of good IAQ management practices. The *BAQ Action Plan* leads you through a logical set of steps to achieve the goal of better indoor air quality in your building. There is broad agreement that both documents, *BAQ* and the *BAQ Action Plan*, used together, can significantly improve IAQ and reduce the likelihood of IAQ problems, thus lowering health risks, increasing comfort and productivity, and reducing exposure to liability from IAQ problems.

In order to use the *Building Air Quality – Action Plan Action Plan* effectively, one must have a thorough understanding of the concepts and practice of managing indoor air quality. In addition, there is extensive internal referencing in this *BAQ Action Plan* to the original *BAQ* guide, making it helpful and easy to use both documents together.

Disclaimer

This document has been reviewed in accordance with policies at the Environmental Protection Agency and the National Institute for Occupational Safety and Health. Information provided is based upon current scientific and technical understanding of the issues presented. Following the advice given will not necessarily provide complete protection in all situations or against all health hazards that may be caused by indoor air pollution. Mention of any trade names company or commercial product does not constitute endorsement or recommendation of use. This document is in the public domain and may be reproduced in whole or in part. EPA requests appropriate acknowledgement of authorship if the work is reproduced. In the event this EPA work is changed, EPA requests that the acknowledgement includes language about adaptation or revision.

Evaluation of IEQ Concerns

1. **Reporting of an IEQ event/concern**
    a. The following complaints should be referred to Maintenance Manager for initial investigation.
        i. Temperature or humidity problems
        ii. Draftiness
        iii. Lack of air or “stuffy” air
        iv. Dirt or particulates coming from the ventilation system.
        v. Vibrations from idling vehicles and equipment
        vi. For tenant facilities, the property manager should be contacted to forward the concerns to the maintenance manager.

    If the cause of a problem cannot be found, complaints or concerns will be forwarded to Safety & Compliance Manager for assistance. More complex concerns which may include unusual odors such as chemical smells and exhaust-type odors; any illness related to working in a particular work area/office/tenant area; and visible mold growth should also be directed to the Maintenance Manger AND the Safety & Compliance Manager.

2. **Identification of IEQ Problems**

    Building occupants who experience irritation or symptoms that may be related to the quality of indoor air should notify their supervisor / property manager and also complete the Indoor Air Quality Questionnaire (see Attachment B) and forward the completed

form to the Maintenace Manger for review. The questionnaire will be used to obtain information about the nature of the complaints/concerns and symptoms and also to determine the magnitude of the problem. Maintenance will review the form and take appropriate action.

3. IEQ Investigation

Each IEQ investigation poses a unique set of circumstances that will dictate which of the following areas are addressed and if additional procedures are needed. Generally, following the receipt of an IEQ complaint, the Maintenance Manager will conduct an investigation in accordance with the phased approach outlined below.

a. Phase I Assessment

When notified of a potential problem or concern, Maintenance will conduct an initial on-site investigation. These Phase I Assessments include verification of information provided by the occupant on the Indoor Air Quality Questionnaire and performance of a walk-through inspection of the building. During the walk-through inspection, building ventilation systems will be evaluated by the Maintenance Manager and potential sources of contamination will be identified. If a cause of the IEQ problem is confirmed, Maintenance and/or the Safety & Compliance Manager will initiate corrective action(s) for any cause of the IEQ issue through a work order or project. Maintenance will then report results and or corrective action to the occupant.

If the immediate cause or source cannot be found, a Phase II assessment will be initiated.

b. Phase II Assessment

During a Phase II Assessment, common indoor air quality parameters including temperature, humidity, carbon dioxide, and, in some cases, other chemicals (e.g., carbon monoxide, ozone, formaldehyde and other volatile organic compounds) will be measured.

In addition to sampling, the Maintenance Manager will thoroughly evaluate the immediate work area and building for probable sources of contaminants, such as chemical use and storage, general housekeeping, recent renovations and/or new furnishing, water leaks, activities in the work area, and the building HVAC system. Additional monitoring and/or evaluations may also be conducted as determined by Phase I and II Assessment results.

c. Phase III Assessment

A Phase III Assessment is performed when a definitive cause for the symptoms cannot be determined during the Phase II Assessment of the investigation. Phase III Assessments consist of extensive and more specific monitoring for chemical

and/or microbial contaminants in accordance with the EPA/NIOSH Building Air Quality: A Guide for Building Owners and Facility Managers methodologies; standard and customary industrial hygiene practices; and NIOSH, OSHA, and EPA sampling and analytical procedures. If the immediate cause or source for the IEQ issue cannot be identified and confirmed at the completion of the Phase III Assessment and occupant concerns still exist, expertise from an outside entity may become involved.

4. **Limitations of IEQ Investigations**

   Sampling methodologies and acceptable exposure limits have been established for many workplace contaminants. However, workers may continue to experience discomfort at contaminant levels below the standards set for occupational exposure. Individual sensitivities vary and the ability to measure possible irritants at low concentrations may be limited by technology. Thus, irritants may be present at concentrations that are undetected, but which may cause health effects in sensitive individuals. Also, the sampling and measuring of indoor mold contamination in the air and on surfaces is of limited value as mold is found in virtually all environments and because no consensus standards or regulatory standards have been established.

5. **IEQ Investigation Report**

   The IEQ investigation report will summarize the findings of all the investigated parameters and the results of any air sampling conducted and will provide conclusions regarding possible causes of the problems occupants are experiencing. Based on the findings of the IEQ investigation, recommendations as to how to resolve any potential or existing IEQ problems will be provided. The final report will be shared with management, staff, and other occupants.

Recordkeeping

One important element underlying the actions described in this guidance is the development and maintenance of a comprehensive, easy-to-use record keeping system. The IAQ Manager may want to designate a file cabinet, bookshelves, or notebooks to store information on the IAQ program, including steps taken to complete the Action Plan. Alternatively, the IAQ Manager may wish to develop a single list of all pertinent IAQ records and their locations. These records will be a valuable tool to help the IAQ Manager coordinate day-to-day IAQ activities as well as respond efficiently and effectively to IAQ problems. These records will also serve as documentation of program implementation.

Checklist

To assist building management in verifying implementation of the Action Plan, EPA provides a Checklist. The Checklist is designed to highlight the guidance presented in *Building Air Quality – Action Plan: A Guide for Building Owners and Facility*

Managers and closely matches the recommendations contained in the eight steps described above. Answering these questions will help you determine whether you have taken all of the steps the EPA recommends to implement good IAQ management practices or whether additional actions should be taken to bring your building up to the level described in the guidance. As you address the issues discussed in the Checklist, keep records of your progress so you can refer to them later if questions or related issues arise.

Hazard Communication

Purpose

To inform all employees, by means of labels, Safety Data Sheets (SDS) and Training, of the physical and health hazards to which they may be exposed.

References

OSHA 29 CFR 1910.1200; 1926.59

OSHA has established a minimum number of chemicals, which are considered hazardous and are covered by the Standard. These are:

- Chemicals listed by OSHA in 29 CFR 1910, Subpart Z, Toxic and Hazardous Substances; and
- Chemicals listed by ACGIH in Threshold Limit Values for Chemical Substances and Physical Agents.

The National Toxicology Program's Annual Report on Carcinogens.

The International Agency on Research on Cancer's Monographs.

Policy

S.C. Swiderski, LLC as an employer engaged in a business where hazardous materials are either used or produced for use or distributed, or where its workers have the potential for contact with hazardous materials in their workplace, will ensure that the hazards of all materials found in the workplace will be evaluated, and that information concerning their hazard will be transmitted to all affected employees. Accordingly, this policy describes how these criteria will be met.

The Safety & Compliance Manager will be responsible for:

Revision #3
Created 2026-05-03 15:25:26 UTC by Marc Bouwer
Updated 2026-05-03 15:29:12 UTC by Marc Bouwer