Farm Safety Photo Tips for Media Fatality File

Man Mauled During Paid Photo Op with Black Leopard in ‘Backyard Zoo’

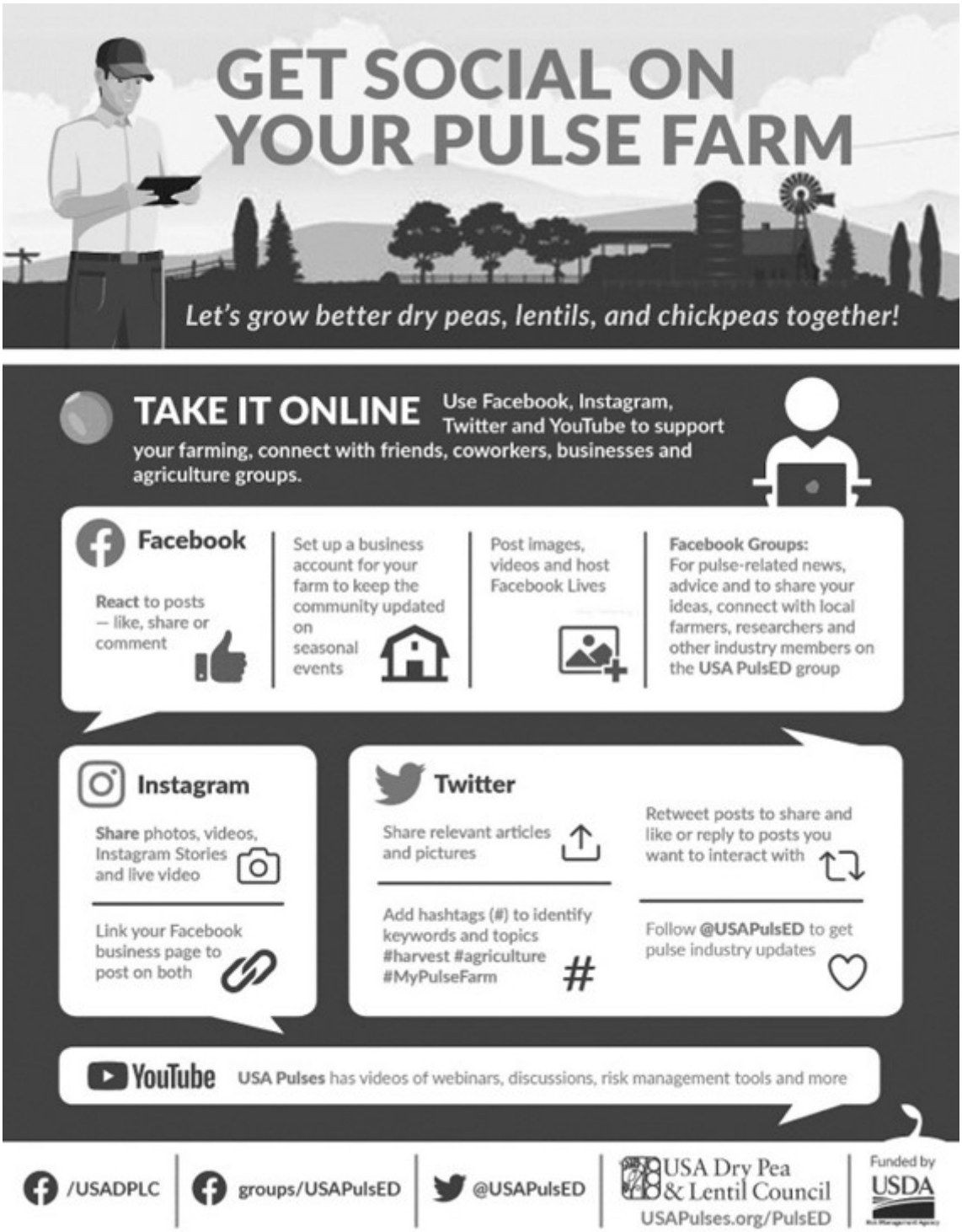
A man in South Florida was mauled by a black leopard after he paid $150 for a “full-contact experience” with the big cat in what is being described as a “backyard zoo.” The experience was supposed to include playing with the leopard, rubbing its belly, and taking pictures… instead the man has had to undergo multiple surgeries.

Originally reported by WPLG Local 10 News, the incident took place behind a home in Davies, Florida on August 31st. The experience was offered by a man named Michael Poggi who runs Poggi’s Animal House: a self-described animal sanctuary that, according to its now-removed Facebook page, “rescues […] and breeds rare and endangered animals.”

According to WPLG’s reporting, Dwight Turner discovered the backyard sanctuary through Facebook and paid $150 for a “full contact” experience and photo op with the leopard, but as soon as he entered the backyard enclosure, the animal attacked. A report by the Florida Fish and Wildlife Conservation Commission describes Davies’ injuries in gruesome detail, writing that his scalp was “hanging from his head and his right ear was torn in half.”

Davies is suing Poggi and the sanctuary, claiming that the waiver he was asked to sign does not cover the injuries he sustained since the entire experience was illegal. This assertion is backed up by authorities who have charged Poggi with allowing full contact with an extremely dangerous animal and maintaining captive wildlife in an unsafe condition.

Farm Safety Photo Tips for Media Picture This



Source: ***https://www.usapulses.org***

Working Alone Meeting Kit

WORKING ALONE

A person is “alone” at work when they are on their own; when they cannot be seen or heard by another person.

IS WORKING ALONE DANGEROUS, OR, AT LEAST A PROBLEM?

While it is not always hazardous to work alone, it can be when other circumstances are present. Whether a situation is a high or low risk will depend on:

- interaction with the public.
- type of work.
- consequences of an emergency, incident, injury.
- the location.

THE RISKS

Exposure to violence and poor access to emergency assistance are the two main hazards of working alone. However, these hazards can also be faced by people who work with colleagues.

Working alone can increase the likelihood of some workplace hazards or risks occurring and in those cases where incidents do occur, the consequences can be more severe.

JOBS THAT CAN’T BE DONE WORKING ALONE

1. Firefighting operations inside structures that contain atmospheres which are immediately dangerous.
2. Installation, removal or repair of electrical lines over 600

volts
3. Work with de energized electrical lines exposing risk of contact with parts over 600 volts
4. Handling of radioactive, explosive or highly reactive substances
5. Handling of toxic gases, liquids or solids
6. Handling of flammable liquids
7. Working on highly pressurized systems
8. Welding or cutting near combustible materials
9. Using fall arrest equipment or scaffolding
10. Working in extreme weather

LONE WORKER PROTECTION ADVICE

- Talk to your boss and colleagues about your job, the hazards and how to minimize them.
- Can work be rescheduled so you do not have to work alone?
- Agree on a tracking method to be used if you are overdue.
- Carry a personal alarm, cell phone or two-way radio. Manage the batteries so you will always be able to use them.
- Use a buddy system in higher risk situations.
- File a travel plan and let someone know your route and ETA when you drive somewhere alone.
- Keep vehicles well-maintained to avoid breakdowns.
- Stock an emergency survival kit in the vehicle.
- When visiting a possibly intimidating client, take a taxi and have the driver wait outside.
- If you work alone late at night, get a security escort to your vehicle or bus stop.
- Handling cash or other valuables puts you at risk for violent robbery.
- Have your employer take steps to reduce the amount of cash on hand to lower the incentive for robbers.
- Have your work area arranged for maximum visibility from windows.
- Get training in how to avoid and handle a robbery and learn to use the security system.
- Avoid having a lone worker whenever possible, especially for

jobs with a recognized risk.

- Establish a check-in procedure. Make sure that regular contact is kept with all workers. Establish ways to account for people (visually or verbally) while they are working.
- Schedule higher risk tasks to be done during normal business hours, or when another worker capable of helping in an emergency is present.

FINAL WORD

A lone worker can be anyone who works alone in a fixed facility or away from his or her typical base. At times, the definition applies to those who work alone in factories or warehouses on nights or weekends. It also applies to traveling workers in construction, utilities, maintenance and repair, agriculture, and other fields.

Working Alone Meeting Kit – Spanish

QUÉ ESTÁ EN RIESGO

TRABAJAR SOLO

Una persona está “sola” en el trabajo cuando está por su cuenta; cuando no puede ser vista ni oída por otra persona.

¿ES PELIGROSO, O AL MENOS PROBLEMÁTICO, ¿TRABAJAR SOLO?

Aunque no siempre es peligroso trabajar solo, puede serlo cuando se dan otras circunstancias. El hecho de que una situación sea de alto o bajo riesgo dependerá de:

- la interacción con el público.
- el tipo de trabajo.
- las consecuencias de una emergencia, incidente o lesión.
- el lugar.

CUÁL ES EL PELIGRO

LOS RIESGOS

La exposición a la violencia y el escaso acceso a la asistencia de emergencia son los dos principales riesgos de trabajar solo. Sin embargo, estos peligros también pueden ser afrontados por personas que trabajan con compañeros.

Trabajar solo puede aumentar la probabilidad de que se produzcan algunos peligros o riesgos en el lugar de trabajo y, en los casos en que se produzcan incidentes, las consecuencias pueden ser más graves.

COMO PROTEGERSE

TRABAJOS QUE NO SE PUEDEN HACER TRABAJANDO SOLO

1. Las operaciones de extinción de incendios en el interior de estructuras que contienen atmósferas inmediatamente peligrosas.
2. Instalación, retirada o reparación de líneas eléctricas de más de 600 voltios
3. Trabajos con líneas eléctricas sin tensión que expongan al riesgo de contacto con piezas de más de 600 voltios
4. Manipulación de sustancias radiactivas, explosivas o altamente reactivas
5. Manipulación de gases, líquidos o sólidos tóxicos
6. Manipulación de líquidos inflamables
7. Trabajar en sistemas altamente presurizados
8. Soldar o cortar cerca de materiales inflamables
9. Utilizar equipos anticaídas o andamios
10. Trabajar en condiciones meteorológicas extremas

CONSEJOS PARA LA PROTECCIÓN DEL TRABAJADOR SOLITARIO

- Hable con su jefe y sus colegas sobre su trabajo, los riesgos y cómo minimizarlos.
- ¿Se puede reprogramar el trabajo para no tener que trabajar solo?
- Acuerde un método de seguimiento que se utilizará si se retrasa.
- Lleve consigo una alarma personal, un teléfono móvil o una radio bidireccional. Gestione las baterías para poder utilizarlas siempre.
- Utilice un sistema de compañeros en situaciones de alto riesgo.
- Haga un plan de viaje y comunique a alguien su ruta y hora de llegada cuando conduzca solo a algún lugar.
- Mantenga los vehículos en buen estado para evitar averías.
- Tenga un kit de supervivencia de emergencia en el vehículo.
- Cuando visite a un cliente posiblemente intimidante, tome un taxi y haga que el conductor espere fuera.

- Si trabaja solo a altas horas de la noche, consiga una escolta de seguridad hasta su vehículo o parada de autobús.
- Manejar dinero en efectivo u otros objetos de valor le pone en riesgo de sufrir un robo violento.
- Haga que su empleador tome medidas para reducir la cantidad de dinero en efectivo que tiene a mano para disminuir el incentivo de los ladrones.
- Disponga su área de trabajo de forma que tenga la máxima visibilidad desde las ventanas.
- Reciba capacitación sobre cómo evitar y manejar un robo y aprenda a utilizar el sistema de seguridad.
- Evite tener un trabajador solo siempre que sea posible, especialmente en trabajos con un riesgo reconocido.
- Establezca un procedimiento de control. Asegúrese de que se mantiene un contacto regular con todos los trabajadores. Establezca formas de dar cuenta de las personas (visual o verbalmente) mientras están trabajando.
- Programe las tareas de mayor riesgo para que se realicen durante el horario laboral normal, o cuando haya otro trabajador capaz de ayudar en caso de emergencia.

CONCLUSIÓN

Un trabajador solitario puede ser cualquiera que trabaje solo en una instalación fija o fuera de su base habitual. En ocasiones, la definición se aplica a quienes trabajan solos en fábricas o almacenes por la noche o los fines de semana. También se aplica a los trabajadores itinerantes de la construcción, los servicios públicos, el mantenimiento y la reparación, la agricultura y otros campos.

Working Alone Stats and Facts

FACTS

1. Hazards that lone workers may encounter include:
    - accidents or emergencies, including inadequate provision of first aid.
    - sudden illnesses.
    - inadequate provision of rest, hygiene and welfare facilities.
    - physical violence from members of the public and/or intruders.

1. Dangerous Falls. A fall can turn fatal if help is not dispatched immediately. If the worker is knocked out or concussed, they won't be able to call for help. Using security cameras doesn't typically help with lone workers, as it is financially unfeasible to have cameras at every single turn.
2. Health Emergencies. Risks facing lone workers include on the job health emergencies such as heart attacks or strokes are not uncommon for employees working in industrial environments.
3. Workplace Violence. Risks facing lone workers include workplace violence. Workplace violence has become an increasingly important safety and security issue for many organizations.
4. Fires & Explosions. In the event of a fire, or explosion in a remote location, how would a lone worker be able to handle it?

STATS

There are 53 million lone workers in the United States, Canada, and Europe combined. To put that statistic into perspective, it represents about 15% of the overall workforce. In fact, the International Labor Organization estimates that 2.3 million work-related fatalities happen each year.

- 44% of workers say they face personal safety issues in their primary employment practices.
- OSHA states that 48% more assaults occur in the healthcare and social services industries more than any other.
- 62% of social workers have been subject to psychological aggression in the past year, with 86% experiencing this at some point in their careers.
- 15% of social workers have been physically assaulted by clients in the past year, with 30% having experienced this at some point in their career.
- 50% of retail workers that are killed are employed alone at late night establishments, such as liquor stores or gas stations.

- An HSE report found that of the workplace fatalities reported between 2012 and 2017, 22 percent were individuals working in the manufacturing industry.
- In 2014, the Occupational Safety and Health Administration (OSHA) reported multiple Oil & Gas-related fatalities in the United States.

Working Alone Stats and Facts – Spanish

HECHOS

1. Los riesgos que pueden encontrar los trabajadores en solitario son los siguientes:

   - accidentes o emergencias, incluida la prestación inadecuada de primeros auxilios.
   - enfermedades repentinas.
   - la provisión inadecuada de instalaciones de descanso, higiene y bienestar.
   - violencia física por parte de miembros del público y/o intrusos.

1. Caídas peligrosas. Una caída puede resultar fatal si no se envía ayuda inmediatamente. Si el trabajador queda inconsciente o conmocionado, no podrá pedir ayuda. El uso de cámaras de seguridad no suele ser de ayuda en el caso de los trabajadores solitarios, ya que es inviable económicamente tener cámaras en cada uno de los rincones.
2. Emergencias sanitarias. Los riesgos a los que se enfrentan los trabajadores solitarios incluyen las emergencias sanitarias en el trabajo, como los infartos de miocardio o los accidentes cerebrovasculares, que no son infrecuentes en

los empleados que trabajan en entornos industriales.

3. Violencia en el lugar de trabajo. Los riesgos a los que se enfrentan los trabajadores en solitario incluyen la violencia en el lugar de trabajo. La violencia en el lugar de trabajo se ha convertido en un problema de seguridad cada vez más importante para muchas organizaciones.
4. Incendios y explosiones. En caso de incendio o explosión en una ubicación remota, ¿cómo podría un trabajador solitario hacer frente a ello?

ESTADÍSTICAS

Hay 53 millones de trabajadores solitarios en Estados Unidos, Canadá y Europa juntos. Para poner esta estadística en perspectiva, representa alrededor del 15% de la mano de obra total. De hecho, la Organización Internacional del Trabajo calcula que cada año se producen 2,3 millones de muertes relacionadas con el trabajo.

- El 44% de los trabajadores afirman que se enfrentan a problemas de seguridad personal en sus principales prácticas laborales.
- La OSHA afirma que se producen un 48% más de agresiones en los sectores de la asistencia sanitaria y los servicios sociales que en cualquier otro.
- El 62% de los trabajadores sociales ha sido objeto de agresiones psicológicas en el último año, y el 86% lo ha experimentado en algún momento de su carrera.
- El 15% de los trabajadores sociales han sido agredidos físicamente por los clientes en el último año, y el 30% lo han experimentado en algún momento de su carrera.
- El 50% de los trabajadores del sector minorista que son asesinados trabajan solos en establecimientos nocturnos, como licorerías o gasolineras.
- Un informe del HSE encontró que de las muertes en el lugar de trabajo reportadas entre 2012 y 2017, el 22% eran individuos que trabajaban en la industria manufacturera.
- En 2014, la Administración de Seguridad y Salud Ocupacional (OSHA) informó de múltiples muertes relacionadas con el

petróleo y el gas en Estados Unidos.

Working Alone Fatality File

Lone working – gamekeeper found dead following accident on an ATV

The 53-year old, who was employed as a temporary stand-in gamekeeper, sustained serious injuries to his pelvis when the quad bike he was driving overturned on a slope. However, his absence was not detected until 52 hours later, at which point a search was initiated. His body was found some 200 yards away from the scene of the accident, in a separate field.

He had no means of raising the alarm although there was a mobile phone signal and the normal gamekeeper (who was undergoing surgery) had been issued with a phone.

It appears the injured gamekeeper had attempted to reach a nearby farmhouse to seek help and had opened a farm gate in order to get there. The trustees were prosecuted because the injured gamekeeper clearly did not die immediately and if he had a means of communication then he would have had an opportunity to summon help.

The accident occurred in October 2004, but the case had been to the Court of Appeal on a point of law relating to the prosecution of a Trust and the case was not heard in court until March of this year. It was also the first time an agricultural concern had been prosecuted in respect of lone working.

The trustees admitted failing to provide a means of communication or carrying out a risk assessment for a lone worker to report in at the end of a shift.

Advice

Health and Safety Executive investigating officer Lawrence Murray said the decision sent out an important message. “Hopefully other employers will learn from this case and ensure all precautions are taken to cope with the hazards that lone workers are exposed to” he said.

“They need a system in place for lone workers keeping in touch with people and also a means of communication to contact the emergency services if need be.”

Working Alone Fatality File – Spanish

Un guardabosques que trabajaba en solitario fue hallado muerto tras un accidente con un cuadriciclo

El hombre de 53 años, que estaba empleado como guarda de caza temporal, sufrió graves lesiones en la pelvis cuando el cuadriciclo que conducía volcó en una pendiente. Sin embargo, su ausencia no se detectó hasta 52 horas después, momento en el que se inició una búsqueda. Su cuerpo fue encontrado a unos 200 metros del lugar del accidente, en un campo aparte.

No tenía medios para dar la alarma, aunque había señal de teléfono móvil y el guardabosques habitual (que estaba siendo operado) había recibido un teléfono.

Al parecer, el guardabosques herido había intentado llegar a una granja cercana para pedir ayuda y había abierto una puerta de la granja para llegar allí. Los administradores fueron procesados

porque es evidente que el guardabosques herido no murió inmediatamente y si hubiera tenido un medio de comunicación habría tenido la oportunidad de pedir ayuda.

El accidente ocurrió en octubre de 2004, pero el caso había llegado al Tribunal de Apelación por una cuestión de derecho relativa al enjuiciamiento de un fideicomiso y el caso no se vio en el tribunal hasta marzo de este año. También era la primera vez que se procesaba a una empresa agrícola en relación con el trabajo en solitario.

Los administradores admitieron no haber proporcionado un medio de comunicación ni haber realizado una evaluación de riesgos para que un trabajador solitario se presentara al final de su turno.

Consejo

Lawrence Murray, responsable de la investigación del Ejecutivo de Salud y Seguridad, afirmó que la decisión enviaba un mensaje importante. “Esperemos que otros empresarios aprendan de este caso y se aseguren de que se toman todas las precauciones para hacer frente a los peligros a los que están expuestos los trabajadores solitarios”, dijo.

“Necesitan un sistema para que los trabajadores solitarios se mantengan en contacto con la gente y también un medio de comunicación para contactar con los servicios de emergencia en caso necesario”.

Working Alone Picture This



What do you see in this picture that could be dangerous if you were working in this space, particularly if you were alone?

There are several unsafe conditions in this image that could be harmful to any worker, but especially a lone worker. Use the Picture This to spark discussion about the hazards of working alone and the precautions and procedures your organization has in place to protect lone workers. Here are a few observations to get the discussion started.

1. The “fog” of an unknown origin settling in over the area. Is it smoke from a fire? Exhaust from a vehicle? Vapor from an accidental chemical reaction of two spilled materials?
2. If you were alone in here and the “fog” started to appear what would you do? Continue to work? Try and find the source? Open a window?
3. What in your work area could create a hazardous atmosphere? Think about chemicals, working in a confined space, potential sources of exhaust, working from heights, etc.
4. The propane-powered forklift could also cause a hazardous

atmosphere – one that's not visible like the "fog". If you were working alone operating the lift or repairing the lift while it was running (not the best idea in most circumstances) there's a chance you could be overcome by carbon monoxide before you realized what was happening.

Working Alone Picture This – Spanish



¿Qué ve en esta imagen que podría ser peligroso si estuviera trabajando en este espacio, especialmente si estuviera solo?

En esta imagen hay varias condiciones inseguras que podrían ser perjudiciales para cualquier trabajador, pero especialmente para un trabajador solitario. Utilice la imagen para iniciar un debate

sobre los peligros de trabajar solo y las precauciones y procedimientos que su organización ha establecido para proteger a los trabajadores solitarios. He aquí algunas observaciones para iniciar el debate.

1. La “niebla” de origen desconocido se instala en la zona. ¿Es humo de un incendio? ¿Escape de un vehículo? ¿Vapor de una reacción química accidental de dos materiales derramados?

1. Si estuviera solo aquí y la “niebla” empezara a aparecer, ¿qué haría? ¿Seguir trabajando? ¿Intentar encontrar la fuente? ¿Abrir una ventana?
2. ¿Qué hay en su área de trabajo que pueda crear una atmósfera peligrosa? Piense en los productos químicos, el trabajo en un espacio confinado, las posibles fuentes de escape, el trabajo en altura, etc.

1. La carretilla elevadora de propano también podría provocar una atmósfera peligrosa, que no es visible como la “niebla”. Si usted trabaja solo manejando la carretilla o reparando la carretilla mientras está en funcionamiento (no es la mejor idea en la mayoría de las circunstancias), existe la posibilidad de que le invada el monóxido de carbono antes de que se dé cuenta de lo que está ocurriendo.

Excavation and Trenching – Spanish

Los trabajos de excavación y zanjas matan a más de 50 trabajadores al año. Los empleados aprenderán a identificar los riesgos de excavación y zanja, las prácticas de trabajo seguras y los sistemas de protección, así como a recordar los requisitos de protección contra derrumbes diseñados para mantener a los trabajadores seguros.

First Aid: Burns – Spanish

En este curso, aprenderá a evitar que se produzcan quemaduras en el trabajo, a reconocer el grado de una quemadura, a prestar primeros auxilios para diferentes grados de quemaduras y a prestar primeros auxilios para tipos especiales de quemaduras, incluidas las quemaduras eléctricas, las quemaduras por derrames químicos y las quemaduras térmicas (por calor).

Qualitative Fit Testing – Quick Tips

Specific requirements for qualitative fit testing are detailed in the Occupational Safety and Health Administration's (OSHA's) Respiratory Protection Standard, 29 Code of Federal Regulation (CFR) 1910.134 Appendix A – Fit Testing Procedures (Mandatory).

All respirators that rely on a mask-to-face seal must be fit tested to validate the seal is air-tight. This fit test must be performed:

- prior to first issue,
- when there's a change in the model, style or size of respirator used,
- when there's a physical facial change in the person wearing the mask, and
- at least annually

Qualitative fit testing is one of two broad categories of testing that OSHA recognizes. The other option is quantitative fit testing. The qualitative fit test procedures rely on the

subjective sensory (taste, irritation, smell) response of the respirator wearer to a particular test agent, while the quantitative procedures measure actual face seal leakage. For more details on quantitative fit testing see Quick Tips #318: Quantitative Fit Testing.

Fit Test Agents

In the mandatory qualitative fit test protocols, OSHA recognizes four test agents:

1. **Isoamyl Acetate (Isopentyl Acetate or Banana Oil)**This qualitative fit test agent uses a person's response to fruit-like banana aroma to detect leakage into the respirator. A drawback to this agent is lack of a strong reaction in some fit test subjects to the banana odor. Another drawback is it can only be used with respirators equipped with organic vapor cartridges.
2. **Saccharin Solution** This qualitative fit test agent uses a person's response to a sweet taste to detect leakage into the respirator. The drawback to this agent is lack of a strong reaction in some test subjects to a sweet taste.
3. **Bitrix™ (Denatonium Benzoate)**This qualitative fit test agent uses a person's response to a bitter taste to detect leakage into the respirator. The advantage this agent has over Isoamyl Acetate and Saccharin is the bitter taste. Few enjoy a strong bitter taste so an unavoidable response by the test subject is readily noticed.
4. **Irritant Smoke (Stannic Chloride)**This qualitative fit test agent uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride smoke tube to detect leakage into the respirator. The stannic chloride reacts with humidity producing a white smoke with a pungent odor. The drawback to Irritant smoke is that it can be toxic. The smoke contains two compounds: hydrogen chloride (HCl) and tin (Sn). Hydrogen chloride is highly corrosive to human tissue. Inhalation of a relatively low concentration will cause irritation to the upper respiratory tract and eyes. This is why it's such an effective chemical

to use for respiratory fit testing.

Even though these qualitative fit testing agents can be used to fit test both half-mask and full-face respirators, it is important to note that qualitative fit tests only validate an assigned protection (APF) of 10. OSHA has established an APF of 50 for full facepiece respirators, but in order to use a full facepiece beyond 10 times the permissible exposure limit (PEL), a quantitative fit test must be performed.

Respirator Selection and User Seal Checks

Employees must be trained on how to properly don a respirator, how to position it on the face, how to adjust the strap tension, and how to determine an acceptable fit prior to selecting a respirator. The employee then picks the most acceptable respirator from a sufficient number of samples and wears it at least five minutes to assess the comfort (chin properly placed, adequate strap tension, fits across the nose bridge, spans the distance from the nose to chin and does not have a tendency to slip).

The test subject is then required to complete a user seal check as detailed in Appendix B-1 to 29 CFR 1910.134: User Seal Check Procedures (Mandatory).

- **Positive pressure check.** Close off the exhalation valve and exhale gently into the facepiece. The fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators, this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.
- **Negative pressure check.** Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for 10 seconds. Since the design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand, the test can be performed by covering the inlet

opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

- **Manufacturer's recommended user seal check procedures.** The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally as effective.

Fit Test Exercises

Before beginning the qualitative fit testing protocol, employees are given a description of the fit test and their responsibilities during the procedure. All four qualitative fit test protocols use these seven, 60-second exercises:

1. **Normal breathing:** standing position without talking.
2. **Deep breathing:** standing position without talking, breathing slowly and deeply.
3. **Turning head side-to-side:** standing position, slowly turning head side-to side, holding at extreme point and inhaling.
4. **Moving head up and down:** standing position, slowly moving head up and down and inhaling in the up position.
5. **Talking:** talk out loud slowly and loud enough to be heard clearly; read from a prepared text (Rainbow Passage*); count backward from 100 or recite a memorized poem.
6. **Bending over/jogging in place:** bend at the waist as if to touch toes. Jogging in place is substituted for testing done in a shroud that does not permit bending over at the waist.
7. **Normal breathing:** standing position without talking.

*Rainbow Passage:
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long, round arch with its path high about, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man

looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow."

Fit Testing Protocols

Paragraph B of Appendix A to 29 CFR 1910.134: Fit Testing Procedures (Mandatory) describes the procedure to follow for each of the four test agents:

1. Isoamyl Acetate – paragraph B2
2. Saccharin Solution – paragraph B3
3. Bitrix™ Solution – paragraph B4
4. Irritant Smoke – paragraph B5

OSHA also provides a fit testing video that provides a brief overview and general information regarding fit testing requirements.

Commonly Asked Questions

Q: What types of respirators need to be fit tested and fit checked (user seal check)?

A: Any tight-fitting respirator in use unless being used on voluntary basis, whether it is disposable or reusable. This means respirators that contact the skin to form a seal must be fit tested and fit checked (user seal check).

Q: What is the difference between a fit test and a user seal check (fit check)?

A: Both check and verify that the seal between the mask and skin is maintained, however, the procedures, who administers the test and circumstances when each is used differ. The procedures are detailed earlier in this Quick Tip. The employer is responsible for administering the fit test, and it is done by someone other than the user of the respirator. The user of the respirator performs the user seal check (fit check). The circumstances for performing a fit test are defined by OSHA: prior to first issue of a respirator, when there's a change in the model, style or size of respirator used, when there's a physical facial change in the

person wearing the mask, and at least annually. The user seal check (fit check) is done each time the mask is put on, even if this occurs several times per day.

Sources

OSHA's Respirator Fit Testing Resource Page

29 CFR 1910.134 Respiratory Protection Standard Appendix A

29 CFR 1910.134 Respiratory Protection Standard Appendix B-1

OSHA Respiratory Protection etool

The information contained in this article is intended for general information purposes only and is based on information available as of the initial date of publication. No representation is made that the information or references are complete or remain current. This article is not a substitute for review of current applicable government regulations, industry standards, or other standards specific to your business and/or activities and should not be construed as legal advice or opinion. Readers with specific questions should refer to the applicable standards or consult with an attorney.

Source: Grainger Know How – https://www.grainger.com/know-how

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Farm Safety Photo Tips for Media Meeting Kit – Spanish

QUÉ ESTÁ EN RIESGO

LAS EXPLOTACIONES AGRÍCOLAS Y LAS FOTOS

Las explotaciones agrícolas utilizan las fotos no sólo para sus prácticas comerciales, sino también para comunicar las actividades agrícolas a través de las redes sociales, diversos métodos de publicidad en mercados y tiendas de agricultores, noticias y artículos de revistas, y mucho más.

EL CONTEXTO ES IMPORTANTE

Es importante tener en cuenta el contenido de la foto y lo que hay de fondo antes de publicarla. La luz del sol, las sombras, los animales, las personas, los objetos, el clima, los actos y condiciones inseguras y otras distracciones pueden restarle importancia a la foto.

El mejor momento para hacer una foto al aire libre es por la mañana o al atardecer en un día nublado, utilizando el flash y un fondo libre de distracciones.

CUÁL ES EL PELIGRO

CUESTIONES A EVITAR

- Evite hacer fotos delante de estercoleros, tendederos, animales agresivos, tendidos eléctricos, etc.
- Evite mostrar a trabajadores subiendo a silos o graneros sin llevar protección contra caídas o a trabajadores trabajando alrededor de equipos o maquinaria sin protección, como tomas de fuerza y sinfines.
- Si quiere que los niños pequeños aparezcan en una foto, muéstrelos en zonas de juego supervisadas y valladas de la granja.
- Evite mostrar a niños menores de 14 años conduciendo maquinaria agrícola, vehículos todoterreno o cortacéspedes.
- Evite mostrar a adultos con niños montados en el regazo de los adultos en maquinaria agrícola, vehículos todoterreno o cortacéspedes.

COMO PROTEGERSE

10 CONSEJOS PRINCIPALES PARA TOMAR FOTOS

- **Prepárese para el polvo y la suciedad:** Póngase ropa vieja, ya que los perros saltarán y puede que tenga que arrodillarse y vadear el barro. Mantenga la tapa del lente -siempre debe tener una en el objetivo de la cámara- hasta el último momento si hay suciedad o polvo volando. Mantenga la correa de la cámara alrededor de su cuello.

- **Mire antes de disparar:** Observe atentamente lo que más le interese de una granja en particular. ¿Es el ganado, los edificios, las máquinas o lo que está sucediendo? Piense detenidamente en lo que quiere fotografiar antes de precipitarse.

- **Encierre en un círculo tu objetivo:** Sea lo que sea lo que haya decidido fotografiar, camine a su alrededor si puede, para ver qué ángulo ofrecerá la mejor composición. Puede que le sorprenda mucho lo diferentes que pueden parecer las cosas desde otro punto de vista y con la luz procedente de una dirección diferente.

- **Piense en el fondo:** Los fondos pueden distraer mucho en una fotografía. Puede que haga una foto de un fabuloso tractor nuevo sólo para descubrir que los montones de sacos de abono del fondo arruinan por completo la fotografía y usted ni siquiera lo ha visto porque estaba demasiado ocupado mirando el tractor.

- **La magia de los animales:** Al fotografiar animales, sobre todo, busque un fondo liso y trate de evitar los “medio animales” al lado de la foto. Si intenta fotografiar ovejas, sobre todo en un campo en el que están muy bien dispuestas, muévase muy despacio hasta la posición y no establezca contacto visual con ellas. Mire hacia otro lado, observando por el rabillo del ojo hacia dónde se dirige; en el momento en que las mire directamente, huirán.

- **¿Dónde está el sol?** Los días soleados del verano no son un

buen momento para hacer fotografías. El contraste entre las zonas claras y oscuras será muy difícil de manejar. Los días nublados brillantes suelen ser los mejores para la mayoría de las fotografías.

- **Iluminación del paisaje:** La fotografía de paisaje de los campos se realiza mejor cuando hay una buena iluminación direccional fuerte. Por ejemplo, es buena todo el invierno cuando el sol está bajo en el cielo y luego en verano por la mañana y por la tarde. La iluminación cruzada con el sol a su lado mostrará las texturas de la tierra arada y las hileras y surcos mucho mejor que si tienes el sol directamente detrás de usted. El tiempo inestable con cielos dramáticos y luz solar irregular puede hacer las fotografías más interesantes de los campos.
- **Métase en el interior:** Entre en el interior de los edificios, la iluminación será entonces lateral y no desde todas las direcciones.
- **Construya mejor:** Intente encontrar edificios antiguos en una granja, suelen ser mejores fondos para las fotografías. Si es posible, traslade al animal que quiera fotografiar a algún lugar con un fondo liso. Conseguirá una imagen mucho mejor que llenando el fondo con el desorden de la granja. Los edificios modernos, con sus fuertes líneas gráficas, también pueden ofrecer composiciones interesantes.
- **Trabajo manual:** Intente dejar de utilizar el ajuste "automático" de su cámara, pase al manual y experimente hasta que vea la diferencia que pueden suponer la apertura y la velocidad de obturación en sus fotos cuando usted tiene el control y no la cámara.

Lo que debe hacer:

Muestre tractores y otros equipos agrícolas mantenidos y operados de forma segura, incluyendo sistemas de protección contra vuelcos (ROPS), protecciones en su sitio, cadenas de seguridad colocadas, etc.

Muestre a los niños realizando tareas supervisadas y adecuadas a su edad.

Muestre a los trabajadores llevando el equipo de protección personal adecuado para la tarea que están realizando.

Lo que no debe hacer:

NO ponga a los niños en situaciones inseguras: a veces lo "bonito" es inseguro. Por ejemplo, mostrar a un niño de cinco años guiando un gran caballo de tiro puede ser bonito, pero es muy inseguro y nunca debe representarse como una actividad segura, divertida o aceptable.

NO fotografíe a los niños en lugares de trabajo agrícola; muéstrelos más bien en una zona de juego vallada en la que estén debidamente supervisados. La mayoría de los incidentes infantiles relacionados con las granjas ocurren cuando los niños están jugando o haciendo tareas con sus padres en una zona de trabajo agrícola.

NO permita ni muestre a personas que tengan un comportamiento inseguro, como jinetes adicionales, subir a alturas sin protección contra caídas, trabajar con cuchillas o piezas móviles sin protección, etc.

NO permita ni muestre a niños menores de 14 años conduciendo vehículos o maquinaria agrícola.

NO permita ni muestres a niños montando en el regazo de adultos en tractores/maquinaria, vehículos todoterreno o cortacéspedes.

NO permita ni muestre a los niños cerca de animales grandes a menos que haya barreras apropiadas.

CONCLUSIÓN

Una imagen vale más que mil palabras sólo si quien la toma conoce, entiende y es capaz de incorporar prácticas agrícolas seguras en la toma de fotografías.

Farm Safety Photo Tips for Media Meeting Kit

FARMS AND PHOTOS

Farms use photos not just for business practices but also to communicate farming activities through social media, various methods of advertising in farmers markets and stores, news and magazine articles, and much more.

CONTEXT MATTERS

The content of the photo and what is in the background is important to keep in mind before posting photos. Sunlight, shadows, animals, people, objects, weather, unsafe acts and conditions and other distractions can take away from the intent of the picture.

The best time to take a photo outdoors is in the morning or evening on a cloudy day using flash and a background free of distractions.

AVOIDANCE ISSUES

- Avoid taking pictures in front of manure pits, clotheslines, aggressive animals, powerlines, etc.
- Avoid showing workers climbing Silo's or grain bins without wearing fall protection or workers working around unguarded equipment or machinery such as PTO and augers.
- If you want young children in a photo, show them in supervised fenced play areas on the farm.
- Avoid showing children under the age of 14 driving farm machinery, riding ATVs, or ride-on lawn mowers.
- Avoid showing adults with children riding in the adults' laps on farm machinery, ATV's, or lawn mowers.

10 MAJOR TIPS FOR TAKING PHOTOS

1. **Prepare for dust and dirt:** Wear old clothes as dogs will jump up and you may have to kneel down and wade through mud. Keep the lens cap on – you should always have one on a camera lens – until the last moment if there is muck or dust flying about. Keep the camera strap around your neck.
2. **Look before you shoot:** Look around carefully for what is most interesting about a particular farm. Is it the stock, the buildings, the machines or what is actually going on? Think carefully about what you want to take pictures of before rushing in.

3. **Circle your target:** Whatever it is you have decided to take a picture of, walk all around it if you can, to see which angle will offer the best composition. You may be very surprised how different things can look from another viewpoint and with the light coming from a different direction.
4. **Think background:** Backgrounds can be very distracting in a photograph. You may take a picture of a fabulous new tractor only to find that piles of fertiliser bags in the background completely ruins the photograph and you didn't even see them because you were too busy looking at the tractor.
5. **Animal magic:** When photographing animals especially, look for a plain background and try to avoid 'half-animals' at the side of the picture. If you are trying to photograph sheep, particularly in a field where they are all nicely arranged, move very slowly into position and don't get eye contact with them. Look away, just watching where you are going out of the corner of your eye; the second you look at them directly they will run away.
6. **Where's the sun?** The bright sunny days of summer are not a good time to take photographs. The contrast between the light and dark areas will be very hard to handle. Bright overcast days are usually the best for most photography.
7. **Lighting the landscape:** Landscape photography of fields is best done when there is good strong directional lighting. For example, it's good all winter when the sun is low in the sky and then in summer in the morning and the evening. Cross-lighting with the sun at your side will show up textures in ploughed land and rows and furrows much better than if you have the sun directly behind you. Unsettled weather with dramatic skies and patchy sunlight can make the most interesting photographs of fields.
8. **Get inside:** Go inside buildings, the lighting will then be from the side, rather than from all directions.
9. **Better building:** Try to find old buildings on a farm, they tend to make much better backdrops to photographs. If it is possible, move an animal that you want to photograph to somewhere with a plain background. You will get a much

better picture than filling the background with farmyard clutter. Modern buildings with their strong graphic lines can also offer interesting compositions.

10. **Manual work:** Try to move away from using the “auto” setting on your camera, go on to manual and experiment until you see what a difference aperture and shutter speed can make to your pictures when you are in control and not the camera.

DOs:

DO show tractors and other farm equipment being maintained and operated safely, including rollover protective systems (ROPS), guards in place, safety chains attached, etc.

DO show children doing supervised age-appropriate chores.

DO show workers wearing proper fitting personal protective equipment appropriate for the task they are performing.

DONTS:

DON’T put children in unsafe situations – sometimes “cute” is unsafe. For example, showing a five-year-old child leading a large draft horse may be cute, however it is very unsafe and should never be depicted as a safe, fun or acceptable activity.

DON’T photograph children in agricultural work sites; rather show them in a fenced-in play area where they are being properly supervised. Most farm-related childhood incidents happen when children are playing or doing chores with their parents in a farm work area.

DON’T allow or show people engaging in unsafe behavior such as extra riders, climbing heights without fall protection, working with unguarded blades or moving parts, and so on.

DON’T allow or show children under 14 driving farm vehicles or machinery.

DON’T allow or show children riding on adults’ laps on

tractors/machinery, ATVs or riding mowers.

DON’T allow or show children near large animals unless appropriate barriers are evident.

FINAL WORD

A picture is worth a thousand words only if the taker of the picture knows, understands and is able to incorporate safe farm practices in picture taking.

Respirator Selection

Requirement of Substance Specific Requirements – Quick Tips

The Occupational Safety and Health Administration (OSHA) issued its final rule for assigned protection factors (APFs) and maximum use concentrations (MUCs) in the Federal Register on August 24, 2006. This document focuses on the mandatory selection provisions of APFs, MUCs and the APF Table, and their roles in the Substance Specific standards

The APF is the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program.

MUC is the maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC is the upper limit at which the class of respirator is expected to provide protection. Whenever exposures approach the MUC, the next higher class of respirators should be selected. Employers must not apply MUCs to conditions that are immediately dangerous to life or health (IDLH).

The MUC for respirators can be determined by multiplying the APF specified for the respirator by the OSHA permissible exposure limit (PEL), short-term exposure limit (STEL) or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, the MUC must be determined on the basis of relevant available information and informed professional judgment.

Employers must use the APFs and MUCs to select the appropriate type of respirator that meets or exceeds the required level of employee protection. Selection is based on the airborne

contaminant level found in the workplace and the maximum concentration of the contaminant in which a particular type of respirator can be used.

29 Code of Federal Regulations (CFR) 1910.134(d)(3)(i)(A)

Table 1 Assigned Protection Factors [5]

Type of respirator [1,2]	Quarter mask	Half mask	Full facepiece	Helmet/ hood	Loose-fitting facepiece
Air-purifying respirator	5	10 [3]	50	-	-
Powered air-purifying respirator (PAPR)	-	50	1,000	25 [4] / 1000	25
Supplied-air respirator (SAR) or airline respirator • Demand mode	-	10	50	-	-
Supplied-air respirator (SAR) or airline respirator • Continuous flow mode	-	50	1,000	25 [4] / 1000	25
Supplied-air respirator (SAR) or airline respirator • Pressure-demand or positive-pressure mode	-	50	1,000	-	-
Self-contained breathing apparatus (SCBA) • Demand Mode	-	10	50	50	-
Self-contained breathing apparatus (SCBA) • Pressure-demand or other positive-pressure mode	-	-	10,000	10,000	-

Notes:

[1] Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

[2] The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance and use requirements.

[3] This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

[4] The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a workplace protection factor (WPF) or simulated workplace protection factor (SWPF) study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators and receive an APF of 25.

[5] These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).

Common Subpart Z Toxic and Hazardous Substances:

Chemical	Respirator Selection Requirements
Asbestos	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1001(g)(3)(i)** 2. Provide high-efficiency particulate air (HEPA) filters for powered and non-powered air-purifying respirators. 1910.1001(g)(3)(ii) 3. Cannot use filtering facepiece (disposable) respirators. **1910.1001(g)(3)(i)**
Coal tar pitch	None noted. **1910.1002**
4-nitrobiphenyl and 13 carcinogens	None noted. **1910.1003 -1910.1016**
Vinyl chloride	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1017(g)(3)(i)(A)** 2. Provide an organic vapor cartridge that has a service life of a least one hour when using a chemical cartridge respirator for vinyl chloride concentrations up to 10 parts per million (ppm). **1910.1017(g)(3)(i)(B)** 3. Select a canister that has a service life of at least four hours when using a PAPR having a hood, helmet, or full or half facepiece, or a gas mask with a front or back mounted canister, at concentrations up to 25 ppm. **1910.1017(g)(3)(i)(C)** 4. When air-purifying respirators are used, the canisters or cartridges must be replaced prior to the expiration of their service life or the end of the shift in which they are first used, whichever occurs first. **1910.1017(g)(3)(ii) and 1910.1017(g)(3)(ii)(A)**

Inorganic arsenic	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1018(h)(3)(i)(A)** 2. Cannot use half-mask respirators for protection against arsenic trichloride because it is rapidly absorbed through the skin. **1910.1018(h)(3)(i)(B)** 3. Provide HEPA filters for powered and non-powered air-purifying respirators. **1910.1018(h)(3)(i)(C)** 4. Select air-purifying respirators that have a combination HEPA filter with an appropriate gas-sorbent cartridge or canister when the employee's exposure exceeds the PEL for inorganic arsenic and the relevant limit for other gases. **1910.1018(h)(3)(i)(D)(1)** 5. Select front- or back-mounted gas masks equipped with HEPA filters and acid gas canisters or any full facepiece SARs when the inorganic arsenic concentration is at or below 500 milligrams per cubic meter of air (mg/m^3), and half mask air-purifying respirators equipped with HEPA filters and acid gas cartridges when the inorganic arsenic concentration is at or below 100 ($\mu g/m^3$). **1910.1018(h)(3)(i)(D)(2)**
Lead	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1025(f)(3)(i)(A)** 2. Must use full facepiece respirators only for protection against lead aerosols that cause eye or skin irritation at the use concentrations. **1910.1025(f)(3)(i)(B)** 3. Provide HEPA filters for powered and non-powered air purifying respirators. **1910.1025(f)(3)(i)(C)**
Cadmium	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1027(g)(3)(i)(A)** 2. Must use full facepiece respirators when employee experiences eye irritation. **1910.1027(g)(3)(i)(B)**

	3. Provide HEPA filters for powered and non-powered air purifying respirators. **1910.1027(g)(3)(i)(C)**
Benzene	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1028(g)(3)(i)** 2. Use organic vapor cartridge or canister with powered and non-powered air-purifying respirators, and a chin-style canister with full facepiece gas masks. **1910.1028(g)(3)(i)(C)** 3. Ensure that canisters used with non-powered air-purifying respirators have a minimum service life of four hours when tested at 150 ppm benzene at a flow rate of 64 liters per minute (LPM), a temperature of 25°C and relative humidity of 85%. For cartridges used on PAPRs, the flow rates for testing must be 115 LPM for tight fitting and 170 LPM for loose fitting. **1910.1028(g)(3)(i)(D)**
Coke ovens	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1029(g)(3)** 2. Employers may use a filtering facepiece respirator only when it functions as a filter respirator for coke oven emissions particulates. **1910.1029(g)(3)**
Cotton dust	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. 1910.1043(f)(3)(i)(A) 2. Employers must not select or use filtering facepiece respirators at concentrations greater than five times the PEL. **1910.1043(f)(3)(i)(A)** 3. Provide HEPA filters for powered and non-powered air-purifying respirators for concentrations greater than 10 X PEL. **1910.1043(f)(3)(i)(B)**

1,2-dibromo-3-(DBCP)	1. Select atmosphere-supplying respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs.**1910.1044(h)(3)(i)** 2. For entry into or escape from, unknown DBCP concentrations, provide employees with either a combination respirator that includes a SAR with a full facepiece operated in a pressure-demand or other positive-pressure or continuous-flow mode, as well as an auxiliary SCBA operated in a pressure-demand or positive-pressure mode ochloropropaner a SCBA with a full facepiece operated in a pressure-demand or other positive-pressure mode. **1910.100(h)(3)(ii)(A)** and **1910.100(h)(3)(ii)(B)**
Acrylonitrile	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1045(h)(3)(i)** 2. For escape, provide employees with any organic vapor respirator or any SCBA permitted for use under **1910.134(d)(3)(i)(A)**. **1910.1045(h)(3)(ii)**
Ethylene oxide (ETO)	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1047(g)(3)(i)** 2. Employers cannot use half masks of any type due to eye irritation or injury. **1910.1047(g)(3)(i)** 3. Equip each air-purifying, full-facepiece with a front-or back-mounted canister approved for protection against ETO. **1910.1047(g)(3)(ii)**
Formaldehyde	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1048(g)(3)(i)(A)** 2. Equip each air-purifying, full-facepiece respirator with a canister or cartridge approved for protection against formaldehyde. **1910.1048(g)(3)(i)(B)**

	facepiece respirator having a chin-style or a front-or back-mounted industrial-size, canister or cartridge approved for protection against formaldehyde. **1910.1048(g)(3)(i)(C)** 4. Half facepiece respirators can only be used if worn with gas-proof goggles. **1910.1048(g)(3)(ii)**
Methylenedianiline (MDA)	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1050(h)(3)(i)(A)** 2. HEPA filters are used unless MDA is in liquid form or used as part of a process requiring heat. In these two cases a combination organic vapor/HEPA combination canister or cartridge must be used. **1910.1050(h)(3)(i)(B)** and **1910.1050(h)(3)(i)(D)** 3. For escape, provide employees with either a SCBA with a full facepiece or hood operated in the positive-pressure or continuous-flow mode; or a full facepiece air-purifying respirator. **1910.1050(h)(3)(i)(C)**
1,3-butadiene (BD)	1. Employers must select appropriate respirators from Table 1 – Minimum Requirements for Respiratory Protection for Airborne BD. **1910.1051(h)(3)(i)** 2. Air-purifying respirators must have filter elements approved by the National Institute for Occupational Safety and Health for organic vapors or BD. **1910.1051(h)(3)(ii)**
Methylene chloride (MC)	1. Select respirators specified in 1910.134(d)(3)(i)(A) - Table 1 – APFs. **1910.1052(g(3)(i)** 2. Cannot use or select half facepiece of any type because MC may cause eye irritation or damage. **1910.1052(g)(3)(i)** 3. For emergency escape, provide employees with either a SCBA operated in the continuous-flow or pressure-demand mode; or a gas mask with an organic vapor canister. **1910.1052(g)(3)(ii)**

Commonly Asked Questions

Q: What is IDLH?

A: Immediately dangerous to life or health (IDLH) is an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual’s ability to escape from a dangerous atmosphere.

Q: How are cartridge/canister change out schedules calculated?

A: In the absence of an end of service life indicator (ESLI), a cartridge/canister change out schedule is required for gas-and vapor-removing respirators and should be based on objective information or data that will ensure that the canisters and cartridges are changed before the end of their service life. Usually, manufacturers have software to estimate a change out schedule for their cartridges or canisters. Change out schedules are not the same from one manufacturer's cartridges or canisters to that of another manufacturer. This is because the volume and type of adsorbent varies between manufacturers. Additionally, OSHA has mandatory change out schedules for cartridges for certain substances.

Q: Are arrows required in addition to marking pipes?

A: Yes. ASME A13.1-2015 states that arrows shall be used on either end or both ends of the label to show the direction of flow. Arrows should be placed every 50 feet on straight runs, on both sides of wall, floor or ceiling penetrations, and near valves, flanges and changes in pipe direction, and at any line entry or re-entry point.

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Source: Grainger Know How – https://www.grainger.com/know-how

Crystalline Silica and Silica Exposure – Quick Tips

Reduce crystalline silica exposure and learn about silicon dioxide hazards

The term “silica” broadly refers to the mineral compound silicon dioxide (SiO_2). Although silica can be crystalline or amorphous in form, crystalline silica is more hazardous to employees and is the focus of this document. Crystalline silica is a basic component of the Earth’s crust and can be detected in soil, sand, granite and many other minerals. While most commonly found in the form of quartz, it is also found in substances such as cristobalite, tridymite and tripoli. Breathing crystalline silica dust poses an occupational health hazard and can lead to severe health problems and even death.

Respirable crystalline silica dust particles, or particles that are less than 10 micrograms (m) in diameter, pose the greatest threat to employees working with or near crystalline silica. These dust particles occur when workers chip, cut, drill or grind objects that contain crystalline silica. About 2.3 million workers are exposed to respirable crystalline silica in U.S. workplaces. This includes 2 million construction workers who drill, cut, crush or grind crystalline silica-containing materials such as concrete and stone. It also includes 300,000 workers in general industry operations such as brick manufacturing, foundries and hydraulic fracturing, also known as fracking.

In March 2016, the Occupational Safety and Health Administration (OSHA) issued a final rule to control exposure to respirable crystalline silica. The rule is comprised of two standards: one for Construction (29 CFR 1926.1153) and the other for General Industry (29 CFR 1910.1053) and Maritime (29 CFR 1915.1053). The Maritime and General Industry standards are exactly the same but

differ from the Construction standard. The key difference lies in qualifying the level of crystalline silica workers are exposed to. The General Industry/Maritime Standard requires the employer to perform air monitoring to determine the eight-hour average exposure level for each affected job task. Employers governed by the Construction standard can either use a control method spelled out for common construction work tasks or perform air monitoring as detailed in the General Industry/Maritime standard.

Compliance Deadlines

Both the General Industry/Maritime and Construction standards are effective June 23, 2016, and industries have one to five years to comply with most requirements, based on the following schedule:

- Construction: September 23, 2017
- General Industry/Maritime: June 23, 2018, two years after the effective date.
- Hydraulic Fracturing: June 23, 2018, two years after the effective date for all provisions except Engineering Controls, which have a compliance date of June 23, 2021.

Health Effects of Silicosis

Crystalline silica exposure has been linked through epidemiologic studies to chronic obstructive pulmonary disease such as bronchitis and emphysema. It has also been linked to immunologic disorders such as scleroderma, rheumatoid arthritis and lupus in addition to renal disease and stomach or gastric cancer. However, the most prominent disease linked to crystalline silica dust exposure is silicosis.

Silicosis is one of the world’s oldest known occupational diseases, with reports of employees contracting the disease dating back to ancient Greece. By the 1800s, common names for silicosis included grinders’ asthma, grinders’ rot, masons’ disease, miners’ asthma, miners’ phthisis, potters’ rot, sewer disease, sandblasting disease and stonemasons’ disease.

Silicosis is a preventable yet incurable disease that causes scar tissue to build up in the lungs, leading to a reduction in the

ability to take in oxygen. Respirable crystalline silica dust particles pass through the tracheobronchial tree of the lung and collect in the deepest recesses of the lung, called the alveolar structures. This accumulation leads to a significant decrease in lung function. There are three types of silicosis:

1. Chronic or classic silicosis: Results from 15-20 years of low-to-moderate crystalline silica exposure. Chronic silicosis causes shortness of breath and clinical signs of poor oxygen/carbon dioxide exchange in the early stages. In the late stages of chronic silicosis, sufferers will experience extreme shortness of breath and fatigue, as well as chest pain and respiratory failure.
2. Accelerated silicosis: Results from 5-10 years of high exposure. Accelerated silicosis results in severe shortness of breath, weakness and weight loss.
3. Acute silicosis: This most dangerous form of silicosis also causes severe shortness of breath, weakness and weight loss. Acute silicosis arises anywhere from a few months to two years after exposure to extremely high concentrations of crystalline silica dust. Acute silicosis is often fatal.

Because of the severe side effects resulting from crystalline silica exposure, OSHA has significantly reduced the permissible exposure limit (PEL) to 50 micrograms per cubic meter of air (g/m_) averaged over an eight-hour day and introduced a new action limit of 25 g/m_ in the standard.

OSHA’s Three Lines of Defense

To help control the risk of respirable crystalline silica exposure, OSHA’s “three lines of defense” philosophy is suggested. The first line of defense is to eliminate and/or engineer the crystalline silica exposure hazard out. Examples of engineering/elimination controls are:

- Isolating workers from exposure with enclosures or barriers
- Installing local exhaust ventilation systems
- Using wet methods for cutting, chipping, drilling, sawing, grinding, etc.

- Using HEPA-equipped vacuums or wet sweeping for cleaning applications
- NOT using compressed air for cleaning applications
- Substituting non-crystalline silica material when possible
- Using tools with dust collection systems

When engineering/elimination controls are not feasible or practical, the second and third lines of defense can be used to help control the crystalline silica exposure hazard. The second line of defense is administrative controls, such as employee training, awareness (signage), ensuring that employees work in an area where they will not be exposed to crystalline silica, or written programs and policies. The third and last line of defense to be considered is personal protective equipment (PPE). Some examples of PPE are air-purifying respirators and filters, supplied-air respirators and accessories, and protective clothing.

OSHA states that it is important to consult a competent industrial hygienist or other technically qualified person when determining the engineering controls to be used or when collecting air samples to quantify worker exposure. Methods for collecting air samples are outlined in the new crystalline silica rule, 29 CFR 1910.1053 Appendix A.

OSHA has provided an overview of all the requirements of the new crystalline silica rule for General Industry and Maritime in OSHA Fact Sheet 3682 (PDF) and for Construction OSHA Fact Sheet 3681 (PDF).

Commonly Asked Questions

Q: Why is OSHA issuing a new crystalline silica rule?

A: OSHA's previous PELs for crystalline silica were outdated, inconsistent and did not adequately protect workers' health. The previous PELs were based on studies from the 1960s and earlier that did not reflect more recent scientific evidence showing that low-level exposures to crystalline silica cause serious health effects, including lung cancer. In the 45 years since the previous PELs were established, several agencies including OSHA identified

respirable crystalline silica as a human carcinogen. Previous construction and shipyard PELs were based on an old method of measuring worker exposures to crystalline silica that is not used today. Those previous limits are inconsistent, allowing permissible levels for construction and shipyards to be more than twice as high as levels in general industry. The revised rule will reduce the risk of disease among workers who may inhale respirable crystalline silica and provide the same protection for all workers covered.

Q: What type of air monitors are used to measure crystalline silica exposure and at what level of crystalline silica exposure should a respirator protection program be enforced?

A: The type of air monitor used to measure crystalline silica exposure and the level of crystalline silica exposure requiring respiratory protection is dependent on the size of the crystalline silica particles being generated. The parameters of determining how to monitor for crystalline silica exposure can be found in in 29 CFR 1910.1053 Appendix A.

Q: Can I use a disposable respirator for protection during abrasive blasting?

A: Disposable filtering facepiece respirators (dust masks) will not protect the worker from crystalline silica exposure during sandblasting. Effective engineering controls such as substitution, automation, enclosed systems, local exhaust ventilation and wet methods should be used. In addition, a properly operated and maintained approved abrasive blasting respirator may provide adequate protection to the wearer.

Sources

Occupational Safety and Health Administration (OSHA) Silica Worker Page, 2016

(Rev. 4/2017)

The information contained in this article is intended for general information purposes only and is based on information available as of the initial date of publication. No representation is made that the information or references are complete or remain current. This article is not a substitute for review of current applicable government regulations, industry standards, or other standards specific to your business and/or activities and should not be construed as legal advice or opinion. Readers with specific questions should refer to the applicable standards or consult with an attorney.

Source: Grainger Know How – https://www.grainger.com/know-how

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Safety and OSHA Inspection Checklists – Quick Tips

The most widely accepted means to identify workplace hazards is to conduct safety and health audits. One way to help understand a given situation is to look at it on a periodic basis. A survey conducted by the Occupational Safety and Health Administration (OSHA) in the late 1990s revealed that self-audits are performed for a number of reasons, with the three most common being:

- Careful inspections can reduce injury and illness rates within the workplace by identifying present hazards
- Staying on top of potential hazards is considered the right thing to do by many employers
- Performing self-audits and acting upon any findings helps sustain compliance with OSHA regulations.

Routine self-audits are a cost-effective method of not only identifying safety hazards that need to be corrected, but also for helping ensure compliance with OSHA regulations. Costs associated

with occupational safety and health hazards, beyond potential fines, can be reduced if hazards are corrected. Man-hours lost through workers' compensation and sick leave can be reduced and productivity can remain high. Some insurance carriers in partnership with OSHA offer reduced premiums to employers who perform self-audits.

The most thorough means for performing a self-audit is to use a checklist for each work area. The size and diversity of the business dictates how many checklists are required and how much detail should be in each. While there is no standard checklist format, several key features should be included:

- Name of auditor and date inspected
- Description and specific regulatory citation for all pertinent regulations with a space to note deficiencies
- A feasible completion date for deficiencies found
- Initials and/or date when all corrections have been completed

Workplace Checklist

The following is an example of what a portion of a workplace OSHA checklist could look like for a flammable storage area. Appropriate components depend on individual situations.

INSPECTION REPORT FOR FLAMMABLE STORAGE AREA

Location:
Inspected By:
Date of Inspection:

(Circle all numbers with deficiencies)

Containers

- Are approved containers and portable tanks used for the handling and storage of flammable liquids? 29 CFR 1910.106(d)(2)(i)
- Are portable tanks equipped with sufficient emergency venting to relieve internal pressure under fire conditions?

29 CFR 1910.106(d)(2)(ii)

- Are Table H-2 compliant sized flammable liquid containers in use? 29 CFR 1910.106(d)(2)(iii)
- Are not more than 60 gallons of Category 1, 2, or 3 flammable liquids, or more than 120 gallons of Category 4 flammable liquids stored in a storage cabinet? 29 CFR 1910.106(d)(3)(i)
- Do flammable liquid storage cabinets meet applicable design and construction requirements? 29 CFR 1910.106(d)(3)(ii)-(d)(3)(ii)(b)
- Is the use and handling of flammable liquids only incidental to the principal business? 29 CFR 1910.106(e)(2)(i)
- Are all flammable liquids stored in tanks or closed containers? 29 CFR 1910.106(e)(2)(ii)
- Do the quantities of flammable liquids stored outside an inside storage room or storage cabinet in a building or in any one fire area of a building exceed the maximums allowed (25 gallons of Category 1 in containers; 120 gallons of Category 2, 3, or 4 in containers; or 660 gallons of Category 2, 3 or 4 in portable tanks)? 29 CFR 1910.106(e)(2)(ii)(b)-(e)(2)(ii)(b)(3)
- Are adequate precautions taken to prevent the ignition of flammable vapors? 29 CFR 1910.106(e)(6)(i)
- Are containers of Category 1, 2 and 3 flammable liquids with a flash point of less than 100 °F (37.8 °C) grounded and bonded to containers during dispensing? 29 CFR 1910.106(e)(6)(ii)

Fire Extinguishers

- Are approved fire extinguishers mounted, located and identified so that they are readily accessible to employees? 29 CFR 1910.157(c)(1)-(c)(2)
- Are all fire extinguishers maintained in a fully charged and operable condition and kept in their designated places at all times except during use? 29 CFR 1910.157(c)(4)
- Are all fire extinguishers inspected and recharged regularly, and marked on inspection tags? 29 CFR 1910.157(e)
- Are the portable fire extinguishers provided for employee

use, selected and distributed based on the classes of anticipated workplace fires? 29 CFR 1910.157(d)(1)-(d)(6)
- Are all portable fire extinguishers properly inspected, maintained and tested? 29 CFR 1910.157(e)-(f)(16)
- Upon initial employment and at least annually thereafter, have employees been provided training on the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting? 29 CFR 1910.157(g)-(g)(4)

Exits

- Are exit routes and safeguards properly designed and maintained to minimize the danger to employees? 29 CFR 1910.37(a)-(a)(1)-(a)(4)
- Are exit routes adequately lighted and marked? 29 CFR 1910.37(b) – (b)(7)
- Are exit routes maintained during construction, repairs or alterations? 29 CFR 1910.37(d) – (d)(3)

Correction completion date:
Corrections have been completed (initials and date):
Supervisor:
Date:

Regulations and Record Keeping Standards

Below are two lists. The first highlights major General Industry regulations that are relevant to most work areas. The second details standards that require a written plan or program to be in place when applicable. These lists may not be all-inclusive and may not apply to all work areas.

Work Areas

All work areas should be identified and the applicability of each section of the OSHA standards from Title 29 of the Code of Federal Regulations (CFR) should be considered:

- Walking-working surfaces
  see 1910.21 to 1910.30
- Exit routes and emergency planning

see 1910.33 to 1910.39

- Powered platforms, manlifts and vehicle-mounted work platforms
  see 1910.66 to 1910.68
- Occupational health and environmental control – ventilation, noise and radiation
  see 1910.94 to 1910.98
- Storing and handling of hazardous materials
  see 1910.101 to 1910.126
- Personal protective equipment (PPE)
  see 1910.132 to 1910.140
- General environmental controls – sanitation, marking physical hazards, permit-required confined spaces and lockout/tagout
  see 1910.141 to 1910.147
- Medical services and first aid
  see 1910.151 to 1910.152
- Fire protection
  see 1910.155 to 1910.165
- Compressed gas and compressed air equipment
  see 1910.166 to 1910.169
- Material handling and storage – use and care of forklifts, cranes, derricks, helicopters and slings
  see 1910.176 to 1910.184
- Machinery and machine guarding
  see 1910.211 to 1910.219
- Hand ad portable powered tools and other hand-held equipment
  see 1910.241 to 1910.244
- Welding, cutting and brazing
  see 1910.251 to 1910.255
- Special industries
  see 1910.261 to 1910.272
- Electrical systems standard design, safety-related work practices and maintenance requirements
  see 1910.301 to 1910.399
- Commercial diving operations
- see 1910.401 to 1910.430Toxic and hazardous substances
  see 1910.1000 to 1910.1499

Record Keeping

In addition to a work area checklist, written programs, plans and procedures are often required by OSHA. The following standards require a written plan or program to be in place where applicable:

Emergency Action Plan	1910.38
Process Safety Management of Highly Hazardous Chemicals	1910.119
Hazardous Waste Operations and Emergency Response	1910.120
Respiratory Protection	1910.134
Permit-Required Confined Spaces	1910.146
The Control of Hazardous Energy (Lockout/Tagout)	1910.147
Employee Alarm Systems	1910.165
Powered Industrial Trucks	1910.178
Electric Power Generation, Transmission and Distribution	1910.269

Electrical Safety-Related Work Practices	1910.333
Subpart Z: Specific Chemical Substances	1910.1000 to 1910.1018, 1910.1025 to 1910.1029 and 1910.1043 to 1910.1096
Bloodborne Pathogens	1910.1030
Hazard Communication	1910.1200
Occupational Exposure to Hazardous Chemicals in Laboratories	1910.1450
Posting	Job Safety and Health Poster Form 3165
OSHA Forms for Recording Work-Related Injuries and Illnesses	300 Log

Creating and maintaining a checklist for General Industry operations is by no means the final step. When beginning a safety audit program, several ideas should be kept in mind. A team approach to safety is most effective; rotating people on and off the team will keep ideas fresh and enhance perspective. Inspect thoroughly and frequently; any area, regardless of size, can pose hazards that can crop up seemingly overnight. Once hazards are identified, have a system in place for correction.

Q: Are self-inspections necessary?

A: Yes. Self-inspections are an essential and recognized means to identify potential workplace hazards. The only way to be certain of an actual situation is to look at it directly from time to

time. Organizations must know where potential hazards exist and whether they are under control.

Sources

29 CFR 1910

OSHA Small Business Handbook / Small Business Safety and Health Management Series / OSHA 2209-02R 2005

(Rev 11/18)

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Source: Grainger Know How – https://www.grainger.com/know-how

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Hazardous Locations – Classes, Divisions and Groups – Quick

Tips

A major safety concern in all workplaces is the occurrence of fires and explosions. No other aspect of safety receives more attention in the form of codes and standards. Electrical equipment can and does cause fires and/or explosions in certain atmospheres. To minimize the risk of these fires or explosions, electrical/electronic equipment must be designed, tested and labeled as being acceptable for use in the areas in which it is installed.

Hazardous classified locations are areas where the possibility of fire or explosion hazards may exist under normal or abnormal conditions because of the presence of flammable, combustible or ignitable gases, vapors, liquids, dust, or fibers/flyings. These areas are classified solely for the purpose of ensuring the safe and proper specification and installation of electrical/electronic equipment.

Standards for electrical installations have been established and are governed by a variety of organizations throughout the world to ensure safe electrical systems in hazardous locations.

In the United States, the hazardous location classification system is defined by the National Fire Protection Association (NFPA) 70®, National Electric Code® (NEC). NFPA 70 NEC uses the familiar Class/Division system and has added an Americanized version of the International Electrochemical Commission's (IEC) IEC Zone system which maintains the NEC wiring methods and protection techniques.

NFPA 70 NEC Articles 500 through 503 cover the requirements for electrical/electronic equipment and wiring for all voltages in Class I, Divisions 1 and 2; Class II, Divisions 1 and 2; and Class III, Divisions 1 and 2 locations.

NFPA 70 NEC Articles 505 and 506 cover the requirements for the Americanized Zone classification system as an alternative to the Class and Division classification system.

NFPA 70 NEC Classes, Divisions and Groups

NFPA 70 NEC establishes area classifications based on Classes, Divisions and Groups that when combined delineate the hazardous conditions of a specific area. This classification method provides a description of the hazardous material that may be present, and the probability that it is present, so that the appropriate equipment may be selected, and safe installation practices followed.

The Occupational Safety and Health Administration (OSHA) has adopted these hazardous classifications and all except "Groups" are defined in 29 Code of Federal Register (CFR) 1910.399. In 29 CFR 1910.307(c)(2)(ii), OSHA requires all equipment used in a hazardous location to be marked with the class, group and operating temperature or temperature range for which it is approved. Although OSHA does not provide a definition of group classifications in 29 CFR 1910.307 or 399 they do provide a note under 29 CFR 1910.307(c)(1) that states: "*NFPA 70, the National Electrical Code, lists or defines hazardous gases, vapors, and dusts by "Groups" characterized by their ignitable or combustible properties.*" To meet OSHA's marking requirement, the marking must include the hazardous group the equipment is approved to operate in.

Class defines the type of explosive or ignitable substances which are present in the atmosphere. Division defines the likelihood of the hazardous material being present in an explosive or ignitable concentration. **C**lass I flammable gases and vapors are grouped into one of four groups **(Groups A, B, C or D)** based on their physical properties and the ease in which they can be ignited. Class II combustible dusts are grouped into one of three (3) groups: **E combustible metal dusts, F combustible carbonaceous dusts or G other combustible dusts.**

NFPA 70 NEC Hazardous Locations Classes, Divisions and Groups		
Class	Division	Group
I – Flammable gases or vapors may be present	1 – Ignitable concentrations of hazards exist under normal operation conditions and/or where the hazard is caused by frequent maintenance or repair work or frequent equipment failure 2 – Ignitable concentrations of hazards exist under abnormal operation conditions	Group A – Acetylene Group B – hydrogen, butadiene, ethylene oxide, propylene oxide and acrolein Group C – Ethylene, cyclopropane and ethyl ether Group D – Acetone, ammonia, benzene, butane, ethanol, gasoline, hexane, methane, methanol, methane, naphtha, natural gas, propane and toluene
II – Combustible dust may be present	1 – Ignitable concentrations of hazards exist under normal operation conditions and/or where the hazard is caused by frequent maintenance or repair work or frequent equipment failure 2 – Ignitable concentrations of hazards exist under abnormal operation conditions	E – Combustible metal dusts: aluminum, commercial alloys and magnesium F – Combustible carbonaceous dusts: carbon black, charcoal, coal and coke dusts G – Other combustible dusts: Chemicals, flour, grain, plastic and wood
III – Easily ignitable fibers or flyings may be present	1 – Ignitable concentrations of hazards exist under normal operation conditions and/or where the hazard is caused by frequent maintenance or repair work or frequent equipment failure 2 – Ignitable concentrations of hazards exist under abnormal operation conditions	Not Applicable

NFPA 70 NEC Zone Classification System

The Zone Classification System is offered as an alternative to the Class and Division system. It is an Americanized version of the International Electrochemical Commission's (IEC) Zone system which maintains the NEC wiring methods and protection techniques. Zone defines the general nature – if it is a gas or dust – and the probability of hazardous material being present in an ignitable concentration in the surrounding atmosphere. The Zones are based on how often the hazard is present rather than upon normal versus abnormal conditions.

NFPA 70 NEC Hazardous Locations Zones	
Gases, Vapors and Mists	0 – Ignitable concentrations of flammable gases or vapors which are present continuously or for long periods of time
	1 – Ignitable concentrations of flammable gases or vapors which are likely to occur under normal operating conditions; may exist frequently because of repair/maintenance operations or leakage; or equipment is operated in a manner that equipment breakdown/faulty operations could result in the release of ignitable concentrations of flammable gases or vapors and failure of the equipment
	2 – Ignitable concentrations of flammable gases or vapors which are not likely to occur under normal operating conditions and if they do will only persist for a short period of time; or volatile flammable liquids, gases, or vapors are confined within closed containers/systems and can escape only as a result of an accidental rupture; or volatile flammable liquids, gases, or vapors are normally prevented by positive mechanical ventilation, but may become hazardous due to system failure
Dusts and Fibers/Flyings	20 – Combustible dusts or ignitable fibers/flyings are present continuously or for long periods of time

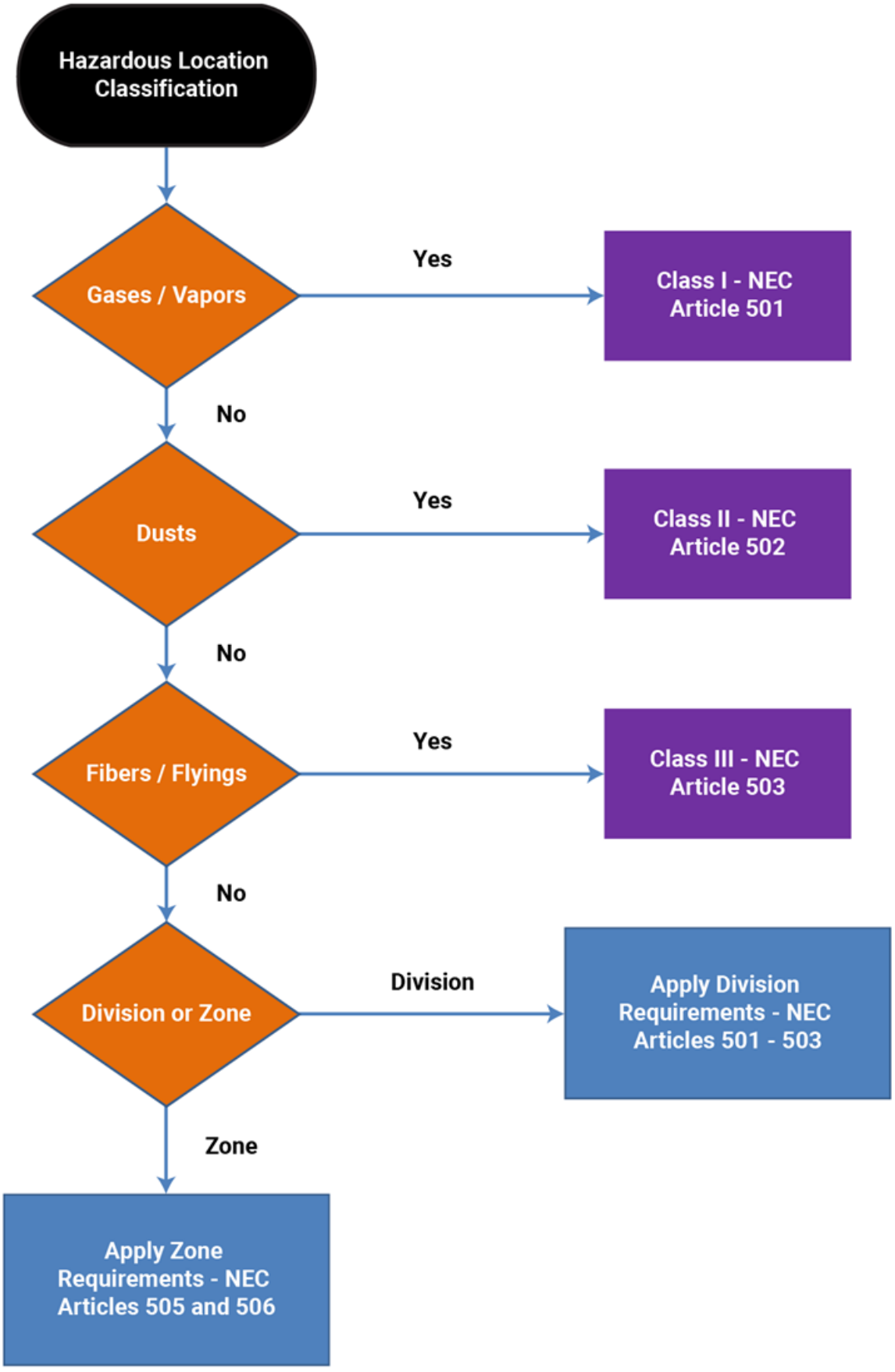
	21 – Combustible dusts or ignitable fibers/flyings are likely to occur under normal operating conditions; or may exist frequently because of repair/maintenance operations or leakage; or equipment is operated in a manner that breakdown/faulty operations could result in the release of ignitable concentrations of combustible dust or fibers/flyings and failure of the equipment
	22 – Combustible dusts or ignitable fibers/flyings are likely to occur under normal operating conditions; or may exist frequently because of repair/maintenance operations or leakage; or equipment is operated in a manner that breakdown/faulty operations could result in the release of ignitable concentrations of combustible dust or fibers/flyings and failure of the equipment

Group defines the type of hazardous material and partly the location of the surrounding atmosphere .

NFPA 70 NEC Hazardous Locations Groups		
Group I	Group II	Group III
Mines susceptible to firedamp (flammable mixture of gases naturally occurring in a mine	Explosive gas atmospheres other than mines susceptible to firedamp – Group II equipment is subdivided into three subgroups	Explosive dusts – Group III equipment is subdivided into three subgroups
	A – Atmospheres containing acetone, ammonia, ethyl alcohol, gasoline, methane, propane, or gases/vapors of equivalent hazard	A – Atmospheres containing solid particles and fibers greater than 500 microns that could be suspended in air and settle out
	B– Atmospheres containing acetaldehyde, ethylene, or gases / vapors of equivalent hazard	B – Atmospheres containing combustible dusts other than combustible metal dusts
	C – Atmospheres containing acetylene, hydrogen, or gases/vapors of equivalent hazard	C – Atmospheres containing combustible metal dusts

Conclusion

Determining the Class, Division and Group or Zone and Group is critical to correctly applying the requirements for a given hazardous location. Comparisons between the two systems are not easily accomplished. Which system is preferred depends on the user's preference, how the areas are classified, and the wiring system used. The Zone system has wider use in the chemical and petrochemical industries. Shown below is a summary of the applicable NEC Articles to reference to ensure the proper requirements are applied.


Hazardous Location Classification
Gases / Vapors
Yes
Class I - NEC Article 501
No
Dusts
Yes
Class II - NEC Article 502
No
Fibers / Flyings
Yes
Class III - NEC Article 503
No
Division or Zone
Division
Apply Division Requirements - NEC Articles 501 - 503
Zone
Apply Zone Requirements - NEC Articles 505 and 506

Commonly Asked Questions

Q: Can I use a piece of equipment approved for use in a Division 1 hazardous location in a Division 2 hazardous location?

A: Yes. If equipment has been approved for use in a Division 1 hazardous location, it can be used in a Division 2 hazardous location, providing it is in the same class and group.

Q: Can equipment approved for a Class I hazardous location be used in a Class II hazardous location?

A: No. Equipment approved for use in Class I hazardous locations cannot be used in Class II hazardous locations.

Q: Are Divisions and Zones equivalent to one another?

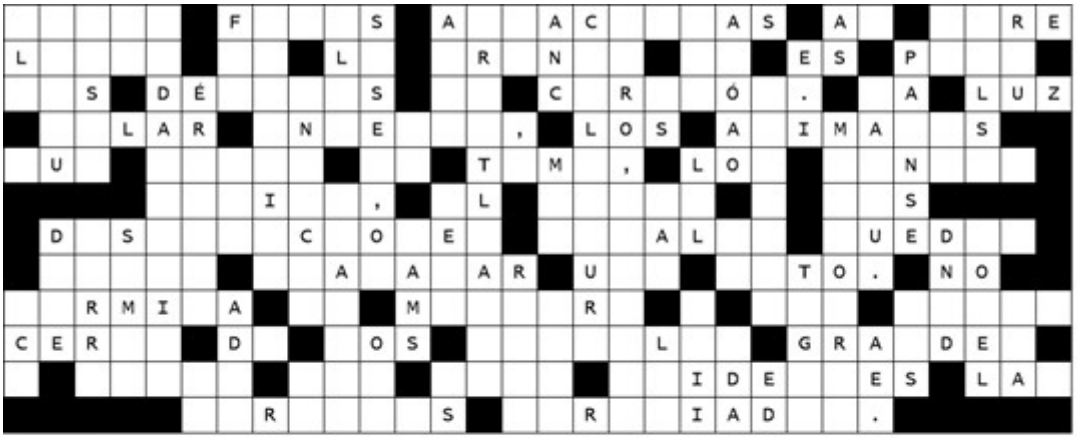
A: When comparing Divisions and Zones, Division 2 is equivalent to Zone 2, but Division 1 is equivalent to either Zone 0 or 1.

Sources
29 CFR 1910.307 – Hazardous (classified) Locations
29 CFR 1910.399 – Definitions Applicable to Subpart S
National Electric Code 2020 edition – National Fire Protection Association

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Source: Grainger Know How – https://www.grainger.com/know-how

Farm Safety Photo Tips for Media Fallen Phrases – Spanish

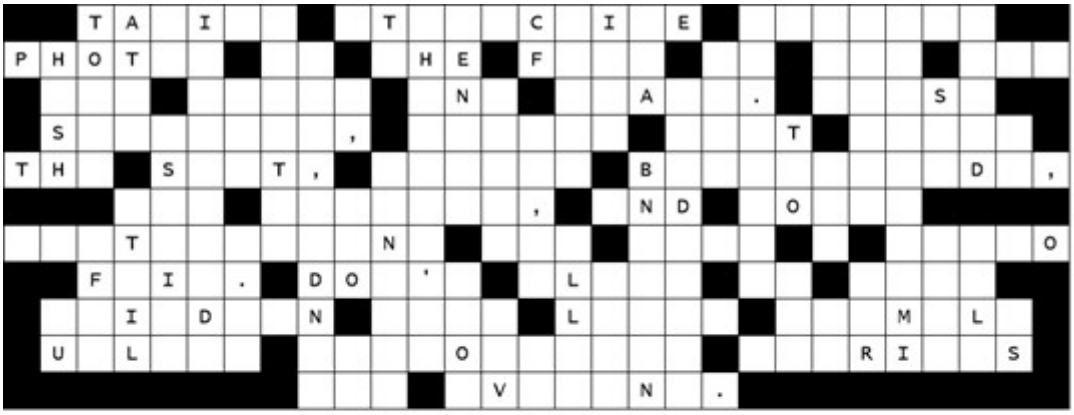




Respuesta:

Hacer fotos atractivas al aire libre en la granja no es para los débiles de corazón. La luz solar intensa, los animales que roban la toma, los fondos sucios, el clima y las distracciones focales pueden hacer fracasar una foto. No permita ni muestre a los niños cerca de los animales grandes a menos que sean evidentes las barreras apropiadas.

Farm Safety Photo Tips for Media Fallen Phrases

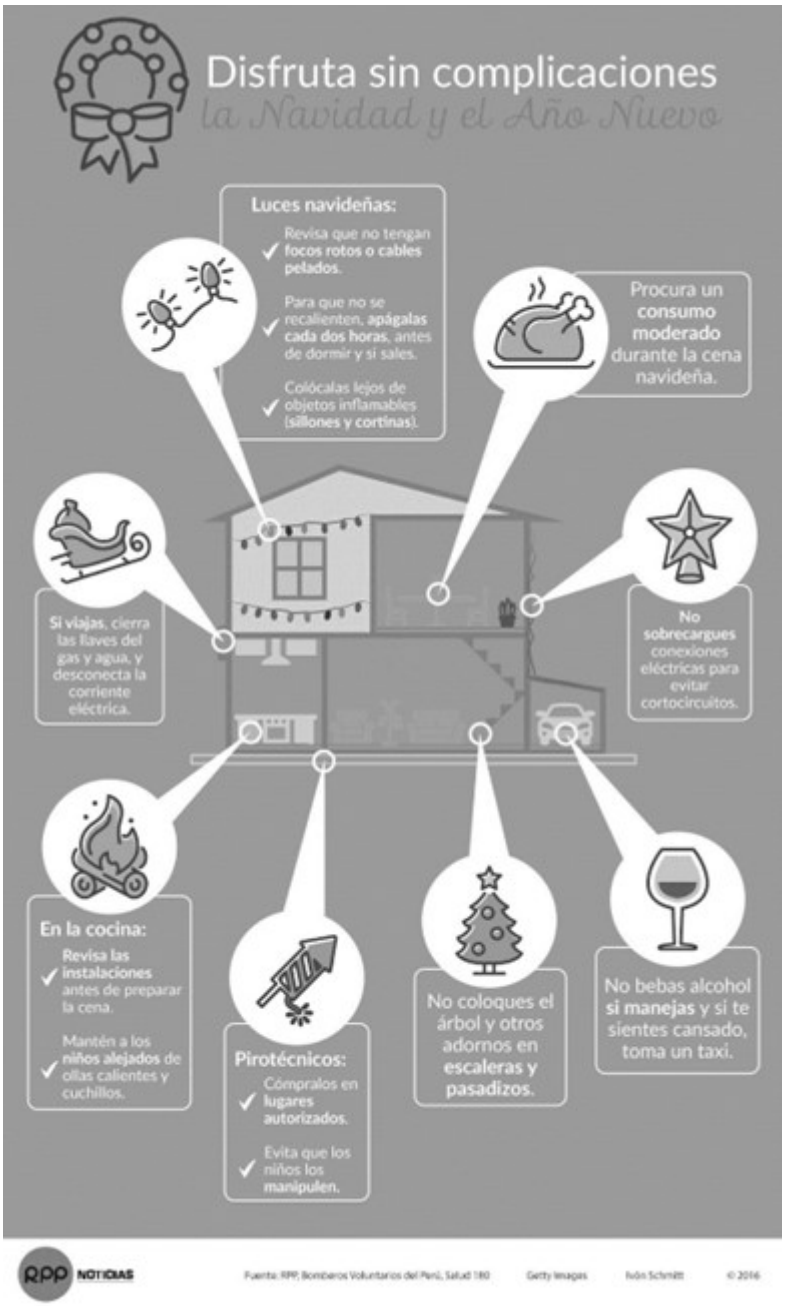




Answer:

Taking attractive outdoor photos on the farm is not for the faint and heart. Harsh sunlight, animal that steal the shot, grungy backgrounds, the weather, and focal distractions can make a photo fail. Don’t allow or show children near large animals unless appropriate barriers are evident.

Enjoy a Safe Holiday Season Picture This – Spanish



Fuente: ***https://rpp.pe/***

Be Prepared for A Disaster Meeting Kit

Effective, time-sensitive communication is imperative before, during and after disasters and emergencies. In the event of an incident, the first employee on the scene must make contact with

someone in a supervisory capacity after contacting authorities (if needed) or taking other steps to deal with the emergency at hand. If you don't immediately reach a supervisor, keep trying.

EMPLOYEE COMMUNICATION

In emergency situations, it is important that all employees are accounted for and that they understand the critical role they play in controlling the flow of information.

A contact list should have each employee's cell phone number, email address and an emergency contact. Properties may want to consider having a "call tree" so all employees can be located and notified quickly. In some cases, such as a natural disaster, cell phone service may be disrupted, and it may be easier to communicate via email. Messages relayed to employees should be clear and concise to ensure consistent delivery.

BOTTON LINE COMMUNICATION

In any communication, it is important to be very specific about the incident so that exaggerations are not intensified as they are being communicated. Stick to the **facts** and not speculate!!

BEST EMPLOYEE PRACTICES FOR ALL EMERGENCIES:

Know your company's designated point person during a disaster or emergency.

- The first employee who arrives at the scene should call 911, if necessary. The employee should then contact the onsite manager or other company designated contact who will provide additional instruction.
- Make sure the answering service, your website and voicemail greeting are updated with important emergency instructions and information for residents.
- Clearly communicate tasks with all onsite employees to

ensure adequate staffing.

- If residents are unable to occupy their apartments following a disaster, work with them to secure interim housing, preferably at the community. Remember, the property is under no obligation to pay for interim housing. Encourage residents to stay with friends or family. Your property supervisor will need to give approval before commitments are made for the residents who are asking for hotel accommodations at the property's expense.

Following these best practices may help you respond and recover more quickly in the event of a disaster or emergency:

- Keep an inventory of all office and shop furniture, equipment, computers, copiers, fax machines, tools, machinery, golf carts and any other equipment on property. Record serial numbers and keep this inventory in a safe location. A copy of this inventory should be kept off- site.
- Take pictures of the equipment noted in the inventory and keep the pictures in a secure location.
- Try to have a set of plans for the physical property showing all locations for mechanical equipment, water and gas shutoffs, main electrical panels, elevators, roof access and standpipes. Keep these plans on hand for emergency service providers.

SUGGESTED SUPPLIES FOR DISASTERS

- Battery-powered radio, flashlight, and extra batteries
- Bottled water
- Canned food and can opener
- Carpet fan blowers
- Digital camera
- Extra clothes and blankets
- First aid kit
- Generators
- Hose
- Mops
- Plastic sheeting

- Poster board and markers for signs
- Pumps
- Sandbags
- Sturdy shoes and work gloves
- Tape and rope to cordon off dangerous areas
- Tarpaulins
- Two-way radio

FINAL WORD

All communications in a disaster must repeat and relay only facts about the impending disaster and not speculate or exaggerate what is being reported. Clear, concise, and correct is the communication mantra.

Be Prepared for A Disaster Stats and Facts

FACTS

1. Deaths from natural disasters have seen a large decline over the past century – from, in some years, millions of deaths per year to an average of 60,000 over the past decade.
2. Historically, droughts and floods were the most fatal disaster events. Deaths from these events are now very low – the deadliest events today tend to be earthquakes.
3. Disasters affect those in poverty most heavily: high death tolls tend to be centered in low-to-middle income countries without the infrastructure to protect and respond to events
4. Most house fires start in the kitchen. Cooking is the leading cause of home fire injuries.
5. Smoking is the primary cause of fatal fires in the U.S. The second most common cause of fatal fires is heating equipment.
6. Arson is the third most common cause of home fires.
7. More people die from smoke inhalation, rather than flames. Fire can suck all of the oxygen from a room and replace it with poisonous smoke and gases before flames even reach the room. People die from lack of oxygen before the fire reaches their room.
8. The U.S. has one of the highest fire death rates in the industrialized world.

STATS

- Between 1980 and 1999, there were 3,656 climate-related events, as opposed to 6,681 between 2000 and 2019. Those differences are reflected in the number of floods, which has more than doubled in the past 20 years, while the incidence of storms increased from around 1,457 to around 2,034.
- About 100 firefighters are killed each year in duty-related

incidents.

- Fire is the third leading cause of accidental death in the home; at least 80 percent of all fire deaths occur in residences most claiming lives of the young, elderly and disadvantaged.
- About 2 million fires are reported each year. Many others go unreported, causing additional injuries and property loss.
- Every year more than 5,000 people die in fires, over 25,000 are injured, and direct property loss is estimated at over $9 billion.
- The world's strongest earthquake in the time period from 1990 and 2013, according to measurement in the Richter scale, was the earthquake in Chile in 1960. With a magnitude of 9.5 this earthquake is the highest ranked earthquake. The magnitude of 9.0 and higher is defined as 'Near or at total destruction – severe damage or collapse to all buildings. Heavy damage and shaking extends to distant locations.
- 60% of American adults have not practiced what to do in their homes or workplaces for disasters.

Be Prepared for A Disaster Fatality File

Earthquake may be to blame for death of man found pinned under car, Nevada officials say

It appeared the man was working on the vehicle when it fell on him, and the accident may have been caused by a July 4 6.4-magnitude earthquake.

A 56-year-old man was found dead pinned underneath a vehicle

Tuesday in Nevada, and officials say an earthquake may be to blame.

The man was last seen at a gas station July 3 and was likely killed while working on his car the following day, Nye County, Nevada, sheriff’s Sgt. Adam Tippetts said in a video statement.

“This death may be the result of the vehicle falling off the jacks on July 4 during the earthquake,” Tippetts said in the statement.