



# World Safety Organization NEWSLETTER

MARCH  
2021

September 27-29  
Tuscany Suites &  
Casino  
Las Vegas,  
Nevada, USA

## SYMPOSIUM 2021

### STRIVING FOR EXCELLENCE *In Making Safety a Way of Life . . . Worldwide*

***The goals of the annual WSO Symposium always include broadening collaboration among the various sectors of the safety field, building professional skills and knowledge, strengthening professionalism within the membership, broadening networking opportunities, and raising awareness of the value and impact of "Making Safety a Way of Life...Worldwide."***

You'll connect with leaders, experts, elected officials, and changemakers of today and tomorrow, who are all committed to promoting the continuous advancement of safety and accident prevention technology and striving for a universal level of professionalism and competence among its members and all professionals and practitioners in the multi discipline of occupational and environmental safety, health and accident prevention.

WSO Symposiums are known for a unique, friendly atmosphere, providing an opportunity for corporate managers and executives, SH&E professionals, advocates of safety and accident prevention, leaders of safety organizations, and WSO members from around the world to network and connect, exchange information, learn about new programs, and gain professional knowledge at a variety of breakout sessions. The WSO Symposium is always the gathering of friends and colleagues, a place to improve performance, and meet new people in the safety field.

Symposium topics generally include, but are not limited to occupational safety and health, environmental safety and health, ergonomics, systems safety management, security, industrial hygiene, hazardous materials management, transportation safety, construction safety, off-the-job safety, recreational safety, safety of the workplace, disaster preparedness, and legislative topics

on the national and global scale. CEU's (USA only) will be awarded through the University of Central Missouri in Warrensburg, Missouri, USA (\$25 fee).



#### Symposium Venue

Located just minutes away from all the excitement of the glittering Las Vegas Strip and Las Vegas Convention Center, Tuscany Suites & Casino provides travelers a relaxing getaway perfect for business travelers, a long weekend with friends, or your next family vacation.

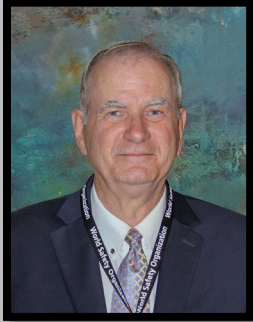
Inspired by the Tuscany region of Northern Italy, the all-suite hotel boasts a warm and welcoming atmosphere surrounded by lush gardens, some of the largest standard hotel suites in the city, and thoughtful amenities to ensure the most comfortable stay possible. Tuscany Suites & Casino will truly be your home away from home.



from the desk of

## DR. CHARLES H. BAKER

*Chief Operations Officer*



Welcome to the March 2021 World Safety Organization Newsletter. As usual the newsletter is filled with useful and interesting information. To keep the newsletter entertaining and functional, we welcome comments and suggestions for improvement. A quick email to Wanda is all that is required.

Once again, the pandemic is in the forefront of our thinking and influences how we do our jobs and live our daily lives. We hear about positive trends and then hear that this may go on for another year or two. Regardless what it is, we hope everyone is acting in a safe and responsible way.

We also hear questions about meetings that World Safety has scheduled in the past such as the annual symposium. No decisions have been made on this year's symposium as the situation is changing at a fast rate. We will advise when we have more information. If we cannot meet in person for the symposium, we will consider some form of virtual meeting. We do not yet know what form this might take.

We continue to welcome new members and to build the organization during these trying times. Please ask your associates and co-workers to consider joining World Safety. With the ICAC accreditation, a World Safety Membership offers a lot of professional value. Encourage others to apply.

With Spring coming to the northern hemisphere everyone will be outside and more active. With that safety becomes a more important consideration. Be safe and encourage others to be safe!

Thank you for your support!  
CHB

# WE NEED YOU

*Do you blog?*

*Do you write articles for your company's newsletter?*

*Do you have relevant information to share?*

*Did your company or agency sponsor a special safety-focused event?*

*Does your company or agency have an upcoming safety-focused event you wish to promote?*

*If so, we would love to feature your content in a future WSO NewsLetter or TechLetter!*

*Just email your article/ blog, author(s) byline, brief bio, and photo to us: [editorialstaff@worldsafety.org](mailto:editorialstaff@worldsafety.org)*

*Please request a publication release form if required by your employer or co-author(s). Authors/ Companies will maintain all proprietary rights, and WSO will state where the original content was posted or published, if applicable.*

The WSO NewsLetter is Published by WSO WORLD MANAGEMENT CENTER 106 W Young St #F, Warrensburg, Missouri 64093 USA | +1 (660) 747-3132 | [info@worldsafety.org](mailto:info@worldsafety.org) | [editorialstaff@worldsafety.org](mailto:editorialstaff@worldsafety.org) | <https://worldsafety.org>

Statement of Publishing Policy/Publisher: World Safety Organization Inc., World Management Center, PO Box 518, Warrensburg, Missouri 64093 USA.

Editorial Board: Dr. Lon S. McDaniel WSO-CSE/CSS/CHMS/CSI(ML), Dr. Charles H. Baker, Dr. Zdena Zajickova-Hudson, and Dr. Michael L. Thomas WSO-CSE.

The WSO NewsLetter (ISSN 1070-311X) is published by the World Safety Organization for its members and other interested individuals involved in environmental and occupational safety and health, security, public health, transportation, construction, and related professions. Copies are distributed to Missions of the United Nations, Libraries, WSO members, attendees of conferences/ seminars and other interested individuals. The information, data and comments contained in this publication do not necessarily reflect the opinion of the WSO or its policies and programs. Data, articles, etc., offered for this publication, are provided only for information purposes and the WSO is not responsible for the accuracy of content and data in this publication. ©2020, WSO.

# **HYDROGEN SULFIDE**

## **A VERY DANGEROUS GAS**

Article by Domingo E. Rodriguez S.

***The Hydrogen Sulfide (also known as H<sub>2</sub>S) is a very dangerous gas, a lot of people are unaware of the very serious risks to health, as well as the various objects of fire and explosion to which they can be exposed by the presence of H<sub>2</sub>S, by work activities, so accidental, or casual.***

Formula: H<sub>2</sub>S

Composition: H: 5.92% and S: 94.09%

Molecular Weight: 34.08 g / mol.

Identification Numbers:

CAS: 7783-06-4

UN: 1053

**Flash point:** 100.4 °C

**Auto ignition temperature:** 260 °C

**Boiling point:** -60.33 °C

**Fire and Explosion Hazards:** This compound is heavier than air, it can travel considerable distances up to source of ignition and flame is retracted. Being a material with an auto-ignition point, it will ignite at its own temperature, and being under high concentrations will cause sudden and violent explosions. Hydrogen sulfide is slightly denser than air; a mixture of H<sub>2</sub>S and air can be explosive. Hydrogen sulfide burns in oxygen with a flame blue color, and it will be generated Sulfur Dioxide (SO<sub>2</sub>).

Hydrogen sulfide, sewer gas, swamp gas, stink damp, and sour damp) is a colorless gas known for its pungent "rotten egg" odor at low concentrations. It is extremely flammable and highly toxic.

Hydrogen Sulfide also occurs naturally in sewers, manure pits, well water, oil and gas wells, and volcanoes. Because it is heavier than air, hydrogen sulfide can collect in low-lying and enclosed spaces, such as manholes, sewers, and underground telephone vaults. Its presence makes work in confined spaces potentially very dangerous.

Hydrogen Sulfide is used or produced in several industries, such as Industries that produce the most

substantial amounts of H<sub>2</sub>S gas, include:

Drillings and extraction of crude oil and natural gas  
Wastewater treatment, Tanneries, Paper mills, glue and dye production, Mining industry, Construction, and Petroleum refining.

But not only in the places or activities mentioned have terrible accidents occurred due to the presence of H<sub>2</sub>S, but I will also mention a strange accident that happened on a Florida Turnpike highway:

On June 2016, in a strange poisoning accident, a mother and her daughter were found deceased in their still-running the 2006 SUV, on the Florida Turnpike roadway, report of the victims was of carbon monoxide poisoning. But after an investigation deep say that the medical examiner waited for results of toxicology tests on the victims, until urine tests revealed that hydrogen sulfide was the cause of death.

The final report from the Orange-Osceola Medical Examiner's Office, indicated that toxic fumes came from the car battery, located under the passenger seat, it was the cause of the death of those two people.

The Short-term exposures to H<sub>2</sub>S gas can cause headache, nausea, and irritation to the eyes and skin. Prolonged inhalation of H<sub>2</sub>S gas can cause serious injury to a person central nervous system; at high concentration, a person can suffer unconsciousness, coma, seizures and even death.

H<sub>2</sub>S may also affect multiple organs, causing temporary or permanent derangements in the nervous, cardiovascular, renal, hepatic, and hematological systems. "

### **OSHA Standards**

Hydrogen sulfide exposure addressed in specific OSHA standards for general industry, maritime, and construction. This section highlights OSHA standards and documents related to hydrogen sulfide.

(Cont. on page 4)

### **IMPORTANT NOTICE TO OUR MEMBERS**

**Our P.O. Box is permanently closed.**

**Please send any future correspondence to our physical address:**

**106 W Young St #F**

**Warrensburg, MO 64093**

# HYDROGEN SULFIDE

## A VERY DANGEROUS GAS

Article by Domingo E. Rodriguez S.

(continued from page 3)

General Industry (29 CFR 1910)

[1910 Subpart G](#) - Occupational Health and Environmental Control [1910.94](#), (Ventilation).

[1910 Subpart H](#) - Hazardous Materials. [1910.119](#), (Process safety management of highly hazardous chemicals).

[1910 Subpart I](#) - Personal Protective Equipment. [1910.134](#), (Respiratory Protection).

[1910 Subpart J](#) - General Environmental Controls. [1910.146](#), (Permit-required confined spaces).

[1910 Subpart Z](#) - Toxic and Hazardous Substances. [1910.1000](#), (Air contaminants).

The OSHA has established the following norm to carry out work in places with exposure to the presence of H<sub>2</sub>S:

The gas exposure time is 20 ppm (parts per million) established in the norms of the OSHA Exposure Limit (PEL), for 8 (eight) hours of work, the time-weighted average (TWA); and it is legally enforceable.

10 ppm is the REL (Recommended Expose Limit) set by NOISH, the USA.

10–20 ppm is the borderline concentration for eye irritation.

20 ppm is the acceptable ceiling concentration established by OSHA.

50 ppm is the acceptable maximum peak above the ceiling concentration for an 8-hour shift, with a maximum duration of 10 minutes.

50–100 ppm leads to eye damage.

At 100–150 ppm the Olfactory nerve is paralyzed after a few inhalations, and the sense of smell disappears, often together with awareness of danger.

320–530 ppm leads to Pulmonary Edema with the possibility of death.

### Safety Recommendations, In The Event Of H<sub>2</sub>S Leak, Are As Follows:

Some initial safety recommendations for the protection of people, in case of an H<sub>2</sub>S leak, are the following:

Evacuate the area immediately.

Isolate the hazard area.

Keep out unnecessary and unprotected personnel.

Evacuate downwind locations (a direction contrary to that of the wind).

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Ventilate area.

Eliminate all ignition sources.

Use grounded, explosion-proof equipment.

Distant ignition and flashback are possible.

Please Remember that H<sub>2</sub>S exposure is not something to be taken lightly. And Stay Safe

**DOMINGO E. RODRÍGUEZ**

**WSO Member No. 022413**

**Caracas - Venezuela.**

Source:

- A time line of Hydrogen Sulfide (H<sub>2</sub>S) research from Environmental Toxin to Biological Mediator. Szabo, Csaba. Biochemical Pharmacology.

<http://www.utmb.edu./phtox/faculty-staff-students/faculty-and-staff/csaba-szabo>

- Curso Prevención de Riesgos de Sulfuro de Hidrogeno. Manual del alumno. Hazmat School. Caracas (March 2018).

- Hydrogen Sulfide. Occupational Safety and Health Administration (OSHA).

<http://www.osha.gov/hydrogen-sulfide>

- Hydrogen Sulfide. Pollutant Inventory Dept., Agriculture, Water and Environmental. Australia <http://www.npi.gov.au/resource/hydrogensulfide>.

- Hydrogen Sulfide Material Safety Data Sheet. Iowa State University, Dept. of Chemistry (March 2009)

<http://www.ehs.iastate.edu/forms/hydrogensulfide.pdf>

- Hydrogen Sulfide. Immediate Dangerous to Life or Health Concentrations (IDLH). National Institute for Occupational Safety and Health (NIOSH)

<http://www.cdc.gov/spanish/niosh/npg-sp/npgd0337-sp.html>

- Hydrogen Sulfide Inhalation Killed Mother, Toddler on Florida Turnpike in June. Orlando Sentinel Dairy.

(October 4, 2016). <http://www.orlandosentinel.com>

- Why Does My Water Smell Like Rotten Eggs? Hydrogen Sulfide and Sulfur Bacteria in Well Water. Minnesota Dept. of Health.

<http://www.health.state.mn.us/communities/water/well/waterquality/hydrosulfide.html>



# WSO Indonesia for National Safety Month 2021

Submitted by : Soehatman Ramli



In welcoming the National OH&S Month which is held every January by the Indonesian government, WSO Indonesia on February 15, 2021 held an Indonesian Student gathering as well as breaking the MURI Record with the most participants reaching 2300 participants online.

The Event organized by the National OH&S student Forum led by Addin as chairman of the committee, and Aisya as chairman of the forum, took the theme "Actualization of OH&S Culture during the COVID-19 Pandemic in Maintaining the Sustainability of the National Economy".

The event was attended by the Minister of Manpower of the Republic of Indonesia Dr. Dra. Hj. Ida Fauziyah, M.Si, along with officials in the ministry. In his remarks the Minister stated the importance of the OH&S aspect in order to improve worker protection and business continuity to boost productivity. For this reason, the Ministry of Manpower of the Republic of Indonesia encourages the strengthening Indonesia's human resources with OH&S culture through programs including increasing competence and productivity, improving labor regulations, increasing worker protection with social security, and job creation or creation of a flexible and efficient labor market.

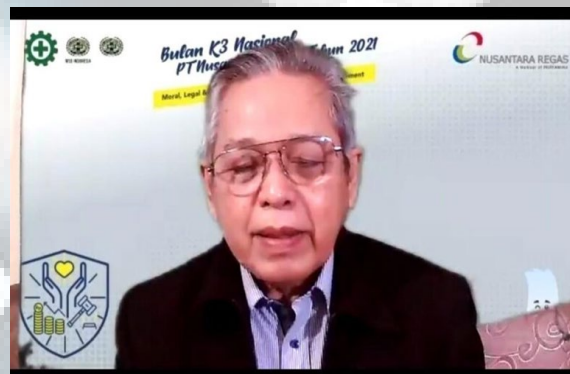


In his remarks Mr. Alfredo A. De La Rosa, Jr., WSO-CSE President-Director of the General World Safety Organization stated the importance of building a safety culture in dealing with a pandemic. "With good leadership and proper communication, you can establish a well-understood system within your circle, and these systems will in turn promote safe behaviors and everyone's engagement with safety. Educate employees on safe behavior. Train your workforce on your system and provide them with accurate information that will help keep them and their coworkers safe.

*(cont. on page 6)*

Demonstrate a positive outlook on safety. As you adapt your systems and train workers, never treat this process like it's a chore - if you set a positive example of safety engagement, your employees will follow these cultures.

Furthermore Soehatman Ramli, as WSO Representative for Indonesia described various programs that have been carried out by WSO Indonesia such as WISCA (WSO Indonesia Safety Culture Awards), WISPASS (WSO Indonesia Safety Passport), Safety Lecture and others with the aim of supporting the Indonesian government's program to build a culture of safety in the middle of society.

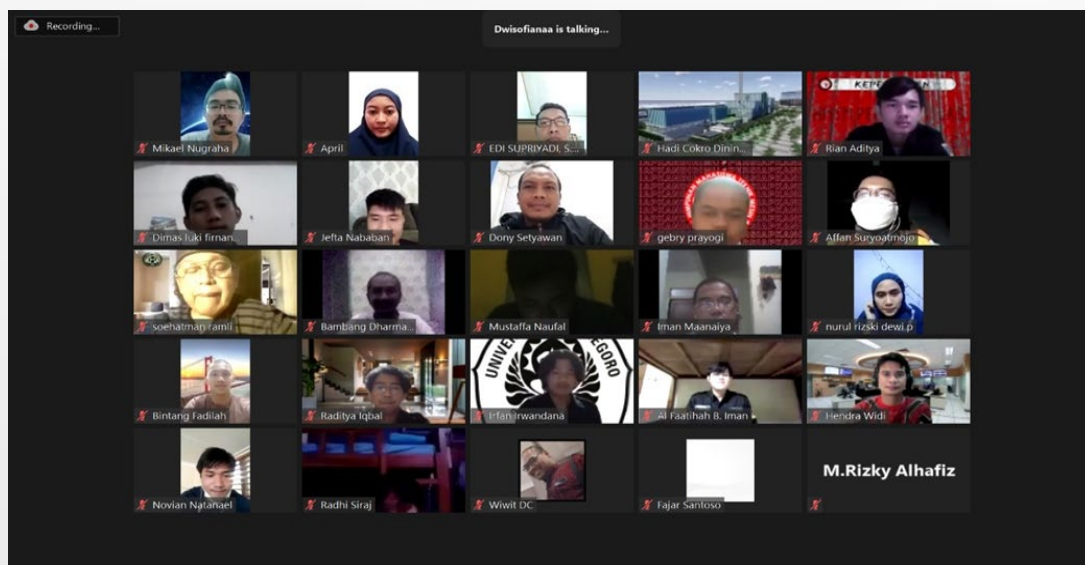


## WSO Indonesia Safety Culture Awards (WISCA)

## WSO Indonesia Safety Lecture

Every week, WSO Indonesia holds a Safety Lecture for OH&S students throughout Indonesia. Many invited experts in the field of OH&S to give lectures to increase the knowledge, preparing OH&S students so that they become professionals. The event has been going on for 8 weeks with various topics such as Process Safety, Safety Culture, Environmental, Mechanical Integrity, Risk Management and so on.

(cont. on page 7)



## WSO Indonesia Safety Passport (WISPASS)

Since 2020 WSO Indonesia has issued a Safety Passport (WISPASS) which can be accessed online. The card is given to non-OH&S workers, and OH&S practitioners in various disciplines. The purpose of this card is a reminder the safety working habits among workers. To ensure that each employee understands safety because every card holder is required to attend the basic safety provided online.



Cards are divided into 4 categories, namely Yellow Passports for non-OH&S workers, Green passports for OH&S practitioners with less than 5 years of experience or fresh graduates, Blue Passports for OH&S practitioners with 5-10 years of experience and Gold passports, for OH&S practitioners with more than 10 years of experience. This can be accessed because it is equipped with a password for card holders and can be updated. The card can be accessed with a Code so that it can be used anywhere.

## WISCA (WSO Indonesia Safety Culture Awards)

Since 2020, WSO Indonesia has organized a program called WISCA (WSO Indonesia Safety Culture Award), a program to encourage the companies in implementing OH&S culture.. For this reason, WSO Indonesia provides safety culture awards in the Star 3, 4 and 5 categories (Bronze, Silver and Gold). The award was given to companies that have implemented a safety culture program in the company and have reached a cultural level based on the SCML (Safety culture Maturity Level) measurement results. The awards event was attended by A. De La Rosa, Jr., WSO-CSE as President-Director General of the World Safety Organization.



For 2021, WISCA will be held on March 3 with participants around 40 companies that have already participated in the verification process.



# SLIP, TRIP AND FALL RISKS ARE COMMON WITH FLOOR HOLES

Submitted by Scott Masters, WSO-CSM; Contract Employee, Construction Lead Safety Specialist, Alliant Corporation; Tennessee and South Carolina USA

Floor holes aren't just holes in the floor. This is one area where many workers forget to take the necessary safety measures to protect themselves and their co-workers, or at minimum throw some caution tape up and call it good. Floor holes can be found inside of buildings, in shops or warehouses, on working platforms, on roofs and in outdoor working environments.

OSHA defines a floor hole as a *gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5 cm) in its least dimension.*

Examples of Floor Holes:

- Roof drains
- Concrete penetrations for piping and ducts
- Skylights
- Unfinished stairways or missing steps
- Pier drilled holes
- Excavations
- Chute floors
- Drains
- Mechanic pits
- Holes created during construction
- Rotting floors that could give way
- Working platforms for silos, tanks, etc.

Floor holes can be guarded or protected by guardrails, covers, and other conventional fall protection methods.

- Walking and working areas and rooftops should be inspected for potential floor holes, including skylights.
- Roof drains and other penetrations should be covered or protected to avoid trip hazards.
- Guardrails used around floor holes must meet specific construction guidelines to prevent falls to lower levels and erected on all unprotected sides or edges.
- Body belts are prohibited and may not be used as part of a fall protection system.

*OSHA Construction Standard 1926.502(b) Guardrail systems states that guardrails must have a top rail of 42" high and strong enough to withstand 200 lbs. of force, mid rails must be 21" high and strong enough to withstand 150 lbs of force and When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.*

(cont. on page 9)





## FLOOR HOLES

(CONT. FROM PG. 7)

When used to protect employees, hole covers must be able to support 2x the weight of the employees, equipment, and their materials.

Covers need to be color coded or marked with the word "Hole" or "Cover".

*OSHA Standard 1926.501(b)(4) says that Each employee on walking/working surfaces shall be protected from falling through holes... and from tripping in or stepping into or through holes (including skylights).*

- Hatchways and chute floors are also considered floor holes and must have protection.
- A hinged door may be used to prevent accidents involving hatches and chutes that may be located on industrial floors or roofs.
- Removable railings should stay in place, even when the opening is not in use.
- When materials are going into a floor chute, protection must be provided to prevent falls through the opening.

Never assume everyone will see the hole and step around it or think that caution tape is enough. A slip or trip near the hole can result in a serious injury or worse. Proper covers, guardrails and signage must be utilized on and near floor hole hazards.

EVERYONE, EVERYWHERE, EVERY DAY:  SAFE HOME



# WSO Board of Directors



## WSO Offers a Professional Membership Level

Being acknowledged as a Professional Member of a safety organization based upon one's education, years of knowledge, and experience in the Safety field is a goal for many to achieve. Not everyone has the college or university degree that is sometimes required to compete for an advanced level Occupational Safety Certification. Not everyone enjoys the Classroom environment of classroom training and potentially taking the computer-type exam, which does not always show one's true abilities in safety management and/or practice. There are many Safety Directors, Safety Coordinators, and Safety Specialists in the safety arena who have many years of experience but lack the mathematical expertise to pass a specific safety certification exam. However, by a submission of one's work/career credentials, résumé, professional references, safety seminar certificates, safety education, and

several testimonies from peers showing his/her elite level, safety practitioners and professionals can become a WSO Professional Member upon verification and approval. This membership level gives one a great opportunity to continue to gain knowledge as a member of the WSO, network with and learn from other members, and attend our annual Symposium featuring world-class safety professionals from around the world presenting various types of safety modules. The minimum requirements can be found on Page 6 or in the WSO Membership and Certification Program booklet. To request a WSO Membership and Certification Program booklet or for more information to apply for or upgrade to the WSO Professional membership, please contact the WSO WMC by telephone or email, or submit the ONLINE REQUEST, and we will email the information to you.



**"Making Safety a Way of Life...Worldwide" since 1975**

VISIT US ON THE WEB

[www.worldsafety.org](http://www.worldsafety.org)

FIND US ALSO ON



**WSO World Management Center**

106 W Young St #F, Warrensburg, MO

64093 USA

Tel: 1-660-747-3132 | Fax: 1-660-747-2647

Email: [info@worldsafety.org](mailto:info@worldsafety.org)

Accredited in compliance with  
ISO/IEC 17024:2012

