



INVESTING AND OPERATING IN MEXICO MITIGATE OCCUPATIONAL HEALTH RISKS AND MEET REGULATORY COMPLIANCE

A COMPREHENSIVE GUIDE FOR ORGANIZATIONS



PREFACE

Innovating OH SERVICES in Mexico

Mexican occupational health and safety regulations have progressed significantly over the last decade. The regulations now reference the challenges organizations may face related to health risk assessments, ergonomics and the detection of psychosocial factors. The obligation to have a qualified medical professional providing medical care, attending to emergencies and accidents and establishing preventive programs in your organization also requires a high-level of regulatory compliance to PEMEX and the Secretaries of Health and Labor.

Industries, such as Oil & Gas, have seen significant success in meeting the occupational health and safety regulations by applying the experience acquired at an international level and by optimizing their resources applied to occupational health. To combat chronic or acute health challenges, adopting a preventative approach, rather than curative is recommended. A clear example of this occurred when there was an outbreak of infectious conjunctivitis, and immediately sanitary control processes and epidemiological restrictions were applied. This controlled the outbreak from becoming more severe.

The key challenges for organizations looking to invest and operate in Mexico are; understanding the regulatory landscape, providing a high quality of medical support, implementing preventive occupational health programs, as well as the ability to understand the habits and customs of both Mexican and non-Mexican employees. In this white paper we provide the relevant guidance to these challenges.

Adela Barona de Sanchez Mejorada

Vice-Chair, National Labor, Occupational Health and Safety and Civil Protection Committee of the Mexican Employers' Union Coparmex

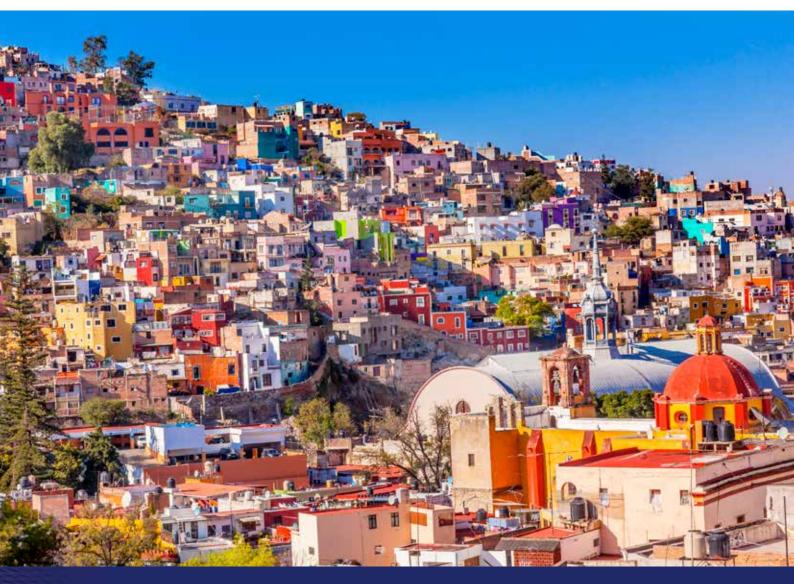
OCCUPATIONAL HEALTH CHALLENGES IN MEXICO

INTRODUCTION

Culturally and geographically diverse, Mexico presents many opportunities for organizations looking to expand their operations. With a population of more than 123 million people and a developing economy spanning across the automotive, manufacturing, oil & gas, telecommunication and tourism industries, the country represents a stable environment for growth.

With the increasing opportunities for organizations to invest and operate in Mexico, it also brings forth challenges in mitigating occupational health risks. Approximately 50% of the population involved in economic activities have occupational health & safety requirements. In 2016 there were 1,408 registered fatalities – 986 of those were work-related accidents, 399 were accidents on the way to or from work, and 23 resulted from occupational diseases. The states with a higher number of fatalities were: the State of Mexico, Jalisco, and Veracruz.

In order to prevent these incidents, organizations need to plan efficiently, not only regarding logistics but also for the complex occupational health standards and compliance that exist in the country. This document provides a framework of Mexico's occupational health challenges, regulations, requirements and best practices in order for organizations to protect their workforce.



OCCUPATIONAL HEALTH & SAFETY REGULATORY FRAMEWORK

Regulatory Structure

Mexico, officially the United Mexican States, is divided into three levels of government: The Federal Union, State, and Municipal governments. Compulsory requirements are established in laws, regulations and in Official Mexican Standards (Normas Oficiales Mexicanas – NOMs). NOMs establish requirements on quality, content, distribution, promotion, and labeling of a large number of goods, services, and activities. Administratively, these are implemented and enforced by Secretariats (the equivalent of Ministries in other countries).

Worker Protection Rights

Worker protection rights are established in Article 123 of the Mexican Constitution. The Constitution makes employers responsible for preventing work-related accidents and illnesses, which workers could suffer as a consequence of their work, as well as the provision of corresponding compensation. This article establishes that the employer must abide by all legal requirements regarding health and safety in their workplace; adopt the necessary measures to prevent accidents in the use of machinery, equipment, and materials; and to protect the life and health of workers, as well as unborn children, in the case of pregnant workers.

Federal Labor Law

The Federal Labor Law, elaborates on Article 123, establishing further requirements regarding health and safety in the workplace. This law is frequently amended and improved to reflect current needs.

General Health Law

The General Health Law, regulates sanitary control on establishments that execute occupational activities. NOMs developed by the Secretariat of Health also establish compulsory requirements for occupational health. In addition, the Secretariat of Health publishes List 1 and List 2 in the Federal Official Gazette, which itemizes toxic or dangerous substances that are subject to sanitary control, namely those for which manufacturers must obtain a sanitary licence and registration.

Civil Protection Law

The General Law of Civil Protection establishes the baseline for coordinating the three government levels regarding civil protection issues. The law establishes requirements applicable to all buildings, fixed or mobile facilities subject to catastrophe, emergency, or disaster.

Occupational health & safety matters are overseen primarily by the Secretariat of Labor and Social Security (Secretaría del Trabajo y Previsión Social – STPS) through the General Department of Health & Safety. To a lesser degree, the Secretariat of Health (Secretaría de Salud – SSA), through the Federal Sanitary Risks Protection Commission, oversees toxic or dangerous substances that are subject to sanitary control, and the Secretariat of State (Secretaría de Gobernación – SEGOB), through the National Civil Protection Coordination Authority, oversees civil protection during emergency situations.



OCCUPATIONAL HEALTH & SAFETY REQUIREMENTS

Preventive Services for Health & Safety and Occupational Medicine

According to the Federal Occupational Health & Safety Regulation, employers are required to establish Preventive Services on Health & Safety (Servicios Preventivos de Seguridad y Salud en el Trabajo) and Preventive Services of Occupational Medicine (Servicios Preventivos de Medicina del Trabajo - SPMT).

The Preventive Services on Health & Safety consist of assigning an internal or external individual to carry out activities that prevent health and safety risks, taking into consideration the specific activities and working conditions. Conversely, the preventive services of occupational medicine consist of providing medical assistance by a physician, or under the supervision of one, an individual trained in occupational medicine. Employers may come to an agreement with employees, allowing the employer to contract external medical services with a public institution (for example, the Mexican Institute of Social Security (Instituto Mexicano del Seguro Social - IMSS).

The role of the head of Preventive Services on Health & Safety is crucial, as this person will develop the workplace OHS Program. That program must include preventive and corrective actions for each item identified in the executed risk assessment. Therefore, it is critical the individual providing this service has extensive experience in the field.

Role of Medical Examinations

According to Federal Occupational Health & Safety Regulations, workers must be given medical examinations at the start of their employment, and again at regular intervals when exposed to physical, chemical, biological, and/or psychosocial agents that can affect their health due to the agent's characteristics, levels of concentration, and time of exposure.

The head of Preventive Services on Health & Safety will identify which NOMs are applicable to the workplace, or to a specific workstation, and will carry out the medical surveillance accordingly.

The responsibilities of the head of Preventive Services on Health & Safety include:

Conduct a risk analysis of the workplace



The requirements for these medical examinations are:

- Employers cannot hire employees older than 15 and under 16, without a medical certificate accrediting their skill for the required work and periodic medical exams ordered by the Labor Inspection (Article 174 Federal Law of Labor).
- Facilities where employees work at heights must perform annual medical examinations and maintain written or electronic records of those examinations.
- Identification, assessment, and monitoring of contaminant chemical agents in the workplace require that exposed employees undergo medical tests, applied by a physician, and the results of those tests are kept for at least five years.
- Medical examinations must be given to workers exposed to noise.
- For employees exposed to vibrations, the employer must facilitate periodic medical examinations (at least every two years), in order to control their health conditions. A written health surveillance program must be in place.
- For employees exposed to the industrial use of ethanol (ethyl alcohol), the employer must facilitate annual medical check-ups for new workers and workers exposed to quantities equal to or exceeding 50% of the Average Maximum Allowed Exposition Limit (1,000 parts per million (ppm)) or 1,900 milligrams per cubic meter. Employers must be mindful that the immediate dangerous limit for health and safety is 3,300 ppm and records must be kept for past and present exposure symptoms.

Exposure to Occupational Hazards (chemical agents)

The Federal Occupational Health & Safety Regulation set requirements for employees which have occupational exposure to chemical agents. These requirements include having an assessment of the chemical polluting agents in the workplace, displaying warning signs in areas which are exposed to such substances, and providing exposed employees with the corresponding personal protective equipment.

To reduce risks to employees, the Secretariat of Health establishes technical standards for the use and management of substances. It establishes maximum permissible limits for employee exposure to chemical agents and carries out sanitary control at certain workplaces, ensuring compliance with standards. On the other hand, the Secretariat of Labor and Social security also establishes a technical standard that regulates the assessment and minimization of occupational exposure to chemical agents.

Employers exposing workers to chemical substances must implement biological monitoring at the workplace. Biological monitoring seeks to complement workplace environment monitoring, to establish whether the Biological Exposure Limits (BEL) are exceeded and take necessary corrective measures.

For workers who may be exposed to chemical substances, employers must measure the concentration of a chemical in a biological medium, such as blood, urine, or exhaled air. Biological exposure indexes (Indices Biológicos de Exposición – BEI) serve as reference values to evaluate the results of the biological exposure.

Medical Surveillance for Ionizing Radiation

The Federal Occupational Health & Safety Regulation and different standards require facilities handling sources of ionizing radiation to provide medical surveillance by a physician to the occupationally exposed personnel (personal ocupacionalmente expuesto - POE).



PROTECTION OF SPECIFIC WORKER CLASSIFICATIONS

Several worker classifications, including pregnant women and those with disabilities, have specific health and safety protective measures covered under Mexico's occupational health and safety regulations.

- Protection of Pregnant or Nursing Women The
 provisions seek to protect the physical integrity and
 health of pregnant or nursing women, and the child,
 prohibiting assignment of a pregnant or nursing
 woman to perform various activities harmful to the
 pregnancy or nursing. Immediately upon knowledge
 of pregnancy, a woman performing such work
 must inform the employer so that the employer can
 provide temporary re-assignment.
- Protection of Minors The Regulation seeks to protect the physical and health integrity of minors, from ages 15 through 18, with a maximum workday of six hours;
- Protection of Workers with Disability In any
 workplace with a disabled worker, the employer
 must perform an analysis to determine the
 requirements of the relevant job. In workplaces of
 over fifty workers, the employer must accommodate
 facilities in order for disabled persons to perform;
- Field Workers To protect physical and health integrity of field workers in agricultural, ranching, aguaculture, forest and mixed activities, an employer

- must provide safety instructions in the workers' language or dialect, or through images and pictograms; and,
- Workplace Promotion of Health and Prevention of Addictions - The STPS will provide guidance on actions and programs to promote health and prevent addictions required as part of an Occupational Health and Safety Program, which includes issuing and updating a Guide of Recommendations to Promote Workplace Health and Prevent Addictions.



ORGANIZATIONAL CHALLENGES POSED BY REGULATORY ENVIRONMENT

Although there is a comprehensive legislative framework in Mexico, complying with all of the regulations and NOMs can be challenging for organizations.

Due to the delay in regulations being updated, employers can struggle to prevent their workforce from current health and safety risks. For example, the list of occupational diseases was created in the 1970s and diseases such as stress are not listed.

An overlap of competences between different Secretariats can also create confusion for employers. In these cases, the employer subject to a specific NOM might be visited by different Secretariats to verify compliance with any overlapping requirements. An

example of this is the specific medical surveillance regarding exposure to ionizing radiation, which would be verified by the STPS as well as the Secretariat of Energy.

It should also be noted that on February 24, 2017, an important amendment to the Federal Labor Law was issued, creating labor tribunals for the first time in Mexico. Therefore, further legislation is expected to be issued to determine the implementation of this amendment. This adds legal uncertainty as to how the procedure will be established since the Conciliation and Arbitration Labor boards from the Executive branch are currently responsible for resolving labor disputes. Because of this, employers potentially involved in labor issues cannot foresee legal costs.

OCCUPATIONAL HEALTH CHALLENGES

Although Mexico has experienced significant economic development over the years and has seen its 'middle-class' grow, it is still considered a developing country and the rise of non-communicable diseases pose additional challenges for organizations in Mexico.

High rate of Non-Communicable diseases

The occurrence of non-communicable diseases (NCDs) has continually increased and the country now has one of the highest diabetes rates in the world.

Hypertension, diabetes, and other NCDs are estimated to account for 60% of all deaths in Mexico, making them the leading cause of death. This is ahead of injuries and communicable, maternal, prenatal, and nutritional conditions. Furthermore, NCDs account for about 70% of all hospital stays, and roughly 40% of all recorded outpatient visits. NCDs not only affect health, but also productivity and economic growth. Noncommunicable diseases are also affecting the younger Mexican population, impacting the productivity of the working population and increasing their dependence on the healthcare system.

According to the epidemiological Bulletin of the Directorate General of Epidemiology of the Ministry of Health, between 2016 and 2017 there was a recorded increase in the number of cases detected or diagnosed with diabetes mellitus type II. In 2016, there were 307,247 cases diagnosed, while the end of December 2017, the figure reached 405,278 cases, which represents a 32% increase in diagnosis. The government has emphasized promotion of state-led disease prevention programs, which could reduce the burden of morbidity and mortality from chronic non-communicable diseases, mainly diabetes and hypertension.

Rise of Obesity

Obesity levels in Mexico are significant and it is projected that 39% of the population will be obese by 2030 if the current increase rate continues (https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf). This led the Health Ministry to launch the National Strategy for the Prevention and Control of Overweight, Obesity and Diabetes in 2013.



Heart Disease and Cancer

Heart disease and cancer rates have also grown, partly due to longer lifespans stemming from improvements in the quality of life over the past few decades.

CASE STUDIES

It is important to note that in Mexico, labor disputes and non-compliance with health and safety regulation is in the hands of the Executive power. The Conciliation and Arbitration Labor board from the Executive branch is responsible for resolving issues, such as compensation in case of death.

The following five cases illustrate non-compliance with health and safety regulations, resulting in illness, injury or death of employees and subsequent legal consequences.

CASE 1

Explosion at petroleum gas distribution facility

On October 15, 2013, a large explosion took place in a liquefied petroleum gas facility. Seven employees died and another four were injured. After the incident, the facility was closed by the State's Direction of Civil Protection. The Secretary of Energy led an investigation with visits to the facility. The investigation revealed non-compliance with different Official Mexican Standards on health and safety (such as NOM-022-STPS-2008 - static electricity at the workplace - safety conditions; NOM-020-STPS-2011 pressure vessels and boilers - safety conditions; and NOM-019-STPS-2011 on the constitution, integration, administration, and operation of the Health & Safety Commissions). It also revealed the lack of a civil protection program and other administrative anomalies, such as nonregistration of eleven gas pipes with the Secretary of Energy, and five pipes with expired valves. The company was sanctioned and fined \$52 million Mexican Pesos (~ \$2.7 million US Dollars) by the Secretary of Energy (SENER) and another \$2 million Mexican Pesos (~ \$104,000 US Dollars) by the Secretary of Labor and Social Prevision (STPS).



CASE 2

Non-compliance with health and safety measures

A company was fined by the Secretary of Labor and Social Prevision (STPS) with more than \$13 million Mexican Pesos (~\$679,000 US Dollars) due to non-compliant health and safety measures, resulting in the death of five employees. The total sanction amount is high because the death of each worker was individualized (~\$400,000 Mexican Pesos for each worker, plus widow's pension and school fees for their children). The workers died being transported in a mine lift of eight tons (originally used to transport material). The cables holding the lift broke and collapsed. Company-wide operations were restricted until they were able to show that the failures found during the post-accident inspection were corrected. The company needed to immediately adopt eleven measures related to the health and safety of employees. The fine was later contested by the company through the Amparo action (which is a judicial review to ensure the constitutionality of administrative acts or laws). A final decision has not been taken as of this paper's publication, but this kind of legal action also implies large cost for the company.

CASE 3

Failure to report an incident

Companies need to comply with different requirements to guarantee the health and safety of employees. They must also report on certain situations, such as accidents at the workplace. Failure to comply with this obligation can lead to sanctions. At the beginning of 2016, the Secretary of Labor and Social Prevision (STPS) was anonymously notified of a work accident occurring at an automotive company. An investigation lead by the STPS confirmed that a worker was electrocuted on one of the production lines and that the accident occurred a month-and-a-half before the anonymous report was made. The company was fined \$330,000 Mexican Pesos (~\$17,000 US Dollars) because it did not report the work accident within seventy-two hours, as required by law.

CASE 4

Need for Environmental and Employee Health Monitoring

In 2012, a mining company dedicated to the production of iron and steel presented a series of health alterations for employees suffering from recent memory loss, muscle aches, and abdominal pain. A health risk assessment was carried out based on the methodology derived from NOM 010 STPS 1999, and an environmental deposition analysis detected the presence of lead in workers' food in the workplace. Clinical Analysis Laboratory studies were conducted, and the level of lead found in employee's blood was above 25 mcg/dl.

Based on these studies and risk analysis, the employer was required to conduct environmental and personal monitoring of the employees' each year, in an effort to prevent further health damage.



CASE 5

Lack of integration among safety, hygiene and health committees

The Secretariat of Labor performed an inspection at a metal manufacturing company, finding federal regulation violations against the Occupational Health & Safety and the Official Mexican Standards. These violations pertained to facilities, fire protection and combat, integration of first aid brigades, evacuation, and communication. These were due to lack of integration of the committees on safety, hygiene, health at work, and training. The inspection also revealed deviations in the determination of exposure to hazardous substances, the presence of noise in the work environment above 90 decibels, and improper handling of chemicals. The total of the fines reached \$2 million Mexican Pesos.

BEST PRACTICES FOR MITIGATING OCCUPATIONAL HEALTH AND SAFETY RISKS

Mitigating occupational health and safety risks and protecting the lives of employees is the primary goal of any organization. In order to effectively manage these risks, organizations must first ensure they have suitably trained and qualified staff in place to help manage occupational health and safety obligations.

Additionally, we have outlined a few specific considerations to have in place to ensure compliance is met:

- Clearly identify which laws that are applicable to your operations by conducting a regulatory compliance gap-assessment or audit;
- Develop clear, plain-language summaries and guides on the requirements for employees (in Spanish and English);
- Carry out regular compliance reviews and/or assessments, based on the level of risk;
- Analyze and assess the local and industryspecific hazards; then implement preventative strategies and policies to manage hazards for the particular project site or location;
- Conduct health, security and safety training programs to raise employee awareness;
- Integrate Federal and IMSS Health Programs into policies and procedures.

For organizations with short-term travelers or assignees to Mexico, managers must be aware of the specific occupational health and safety legal responsibilities that may (directly or indirectly) relate to arrival in the country. Regardless of the reason or length of the visit, it is always best practice to familiarize business travelers and international assignees with things like site entry and exit procedures; emergency evacuation procedures or drills; identification of trained first aid personnel and provisions and the responsible OHS managers on-site; and any site-specific major risks or hazards.



Organizations should consider the following when mitigating risks for their mobile workforce in Mexico:

- Up-to-date information and advice on health and security risks and how to best address those risks through preparation and action
- Real-time tracking and communication platform to locate and communicate with your employees when necessary (i.e. disease outbreak, natural disaster, terrorism)
- 24/7 advice and assistance to cover any routine or crisis situations should they arise
- Assessment of medical facilities and infrastructure where your travelers and assignees work
- Digital learning tools covering health and safety while working in Mexico
- Incident management/crisis management plans and testing of those plans.

When complying with local occupational health legislation, organizations benefit from a return on prevention through avoidance of the below:

- Direct costs such as compensation, lengthy hospitalization costs and post-incident medical costs
- Indirect costs such as salary and administrative costs, productivity losses
- Human costs impacting talent retention and attraction
- Minimize the IMSS (Mexico Social Security Institute) premium which can rise to 166% of the compensation fees.

ABOUT INTERNATIONAL SOS

International SOS is the world's leading medical and travel security risk services company. We care for clients across the globe, from more than 1000 locations in 90 countries.

Our expertise is unique: More than 11,000 employees are led by 1,400 doctors and 200 security specialists. Teams work night and day to protect our members.

We pioneer a range of preventive programmes strengthened by our in-country expertise. We deliver unrivalled emergency assistance during critical illness, accident or civil unrest.

We are passionate about helping clients put Duty of Care into practice. With us, multinational corporate clients, governments and NGOs can mitigate risks for their people working remotely or overseas.

ABOUT ENHESA

Enhesa is the market leader in global environmental, health and safety compliance assurance providing support to businesses worldwide.

We leverage our unique knowledgebase utilizing our in-house team of over 75 dedicated EHS regulatory analysts from more than 40 different countries to provide insights and analysis regarding EHS regulatory developments from around the world.

Enhesa provides this key regulatory intelligence for over 200 jurisdictions around the world in both an easy to understand and utilize manner.

OCCUPATIONAL HEALTH & SAFETY ORGANIZATION IN MEXICO

HEALTH SECRETARIAT

Federal Commission of Protection from Sanitary Risks

LABOR & SOCIAL SECURITY SECRETARIAT

General Department of Occupational Health and Safety

STATE SECRETARIAT

National Civil Protection Coordination Authority

General Health Law

Regulation to the General Health Law regarding Social Health Protection

Regulation for the Sanitary Control of Products and Services Official Mexican Standards

Federal Labor Law

Federal Occupational Health and Safety Regulation Official Mexican Standards General Law of Civil Protection

State Civil Protection Laws

- SSA Offical Mexican Standards (NOMs)
- NOM-048-SSA1-1993, Standard method for assessing health risks caused by environmental agents
- NOM-229-SSA1-2002, Technical requirements for installations, sanitary responsibilities and radiological protection in establishments intended for medical diagnosis using X-rays
- NOM-076-SSA1-2002, Sanitary requirements for processing ethanol (ethyl alcohol)
- NOM-005-SSA3-2010, Minimum infrastructure and equipment requirements for outpatient medical attention for patients
- NOM-007-SSA3-2011, Organization and administration of clinical laboratories
- NOM-047-SSA1-2011, Biological exposure index for occupationally exposed personnel to chemical substances
- NOM-004-SSA1-2013 -Restrictions and sanitary specifications on the use of lead compounds
- NOM-125-SSA1-2016, Sanitary requirements for asbestos processing and use

• NOM-026-NUCL-2011, Medical surveillance for

occupational exposure to ionizing radiation

- STPS Official Mexican Standards (NOMs)
- NOM-013-STPS-1993, H&S requirements for non-lonizing electromagnetic radiations in workplaces
- NOM-100-STPS-1994, Safety requirements for dry chemical dust fire extinguishers with contained pressure
- NOM-101-STPS-1994, Safety requirements for chemical foam fire extinguishers
- NOM-102-STPS-1994, Safety requirements for carbon dioxide fire extinguishers
- NOM-103-STPS-1994, Safety requirements for water fire extinguishers with contained pressure
- NOM-106-STPS-1994, Safety requirements for dry chemical dust type BC fire extinguishers composed of sodium bicarbonate
- NOM-005-STPS-1998, H&S requirements for hazardous chemical substances handling, transport and storage
- NOM-004-STPS-1999, Protection systems and safety devices in machinery and equipment
- NOM-014-STPS-2000, H&S requirements for occupational exposure to abnormal environmental pressures
- NOM-018-STPS-2000, Risk identification and communication system for hazardous chemical substances
- NOM-104-STPS-2001, Safety requirements for dry chemical dust type ABC fire extinguishers composed of ammonium phosphate
- NOM-011-STPS-2001, H&S requirements for noise generation
- NOM-024-STPS-2001, H&S requirements for vibrations at workplaces
- NOM-015-STPS-2001, Occupational exposure to high or low temperatures
 NOM-028-STPS-2004, Safety in processes
- NOM-028-STPS-2004, Safety in processes with chemical substances
- NOM-001-STPS-2008, Safety conditions for buildings, installations and workplaces
- NOM-017-STPS-2008, Selection, use and handing of personal protective equipment
- NOM-022-STPS-2008, Safety conditions for static electricity
- NOM-025-STPS-2008, Lighting requirements
- NOM-026-STPS-2008, H&S colors, signs and risk identification of fluids conducted by pipelines
- NOM-027-STPS-2008, H&S requirements for welding and cutting

- STPS Official Mexican Standards (NOMs)
- NOM-113-STPS-2009, Classification, specifications and testing methods for protective shoes
- NOM-115-STPS-2009, Classification, specifications and testing methods for hardhats
- NOM-116-STPS-2009, Specifications and test methods for harmful particulates, negative pressure air purifying respirators
- NOM-030-STPS-2009, Duties and activities for prevention services in the workplace
- NOM-002-STPS-2010, Fire prevention and protection in the workplace
- NOM-009-STPS-2011, Safety conditions to work at height
- NOM-019-STPS-2011, Constitution, integration, administration and operation of the H&S commissions
- NOM-020-STPS-2011, Safety conditions for pressure vessels and boilers
- NOM-029-STPS-2011, Safety requirements for maintenance of electrical installations in work centers
- NOM-031-STPS-2011, H&S construction conditions in the workplace
- NOM-012-STPS-2012, H&S conditions for ionizing radiation sources in workplaces
- NOM-028-STPS-2012, Labor management system for safety in hazardous chemical substance processes
- NOM-006-STPS-2014, Conditions and safety procedures on materials handling and storage
- NOM-010-STPS-2014, Identification, assessment and monitoring of contaminant chemical agents in the work environment
- NOM-033-STPS-2015, Safety conditions to conduct activities in confined spaces
- NOM-018-STPS-2015, Harmonized system for identification and communication of hazardous chemical substance hazards and risks in workplaces
- NOM-022-STPS-2015, Safety conditions for static electricity in the workplace
- NOM-034-STPS-2016, Safety conditions for employees with disabilities to access and perform activities in the workplace

AUTHORS



Dr Alvaro Sanclamente Medical Director, International SOS

Dr Alvaro Sanclemente is Medical Director, for South America and Latin America at International SOS. An American and Colombian national, Alvaro graduated from Universidad CES, Medellín, Colombia in 1989 with a Degree in Medicine. He also holds a Degree in Health, Economics from Universidad Pontificia Bolivariana, Medellín, Colombia, a Masters in Public Health from Hebrew University of Jerusalem, Israel and a Degree in Occupational Medicine from the University of Manchester, United Kingdom. Since joining International SOS, Alvaro has assessed healthcare systems and medical facilities in more than 160 countries/locations in South America, Caribbean, Europe, Middle East, Africa and Asia, has performed several Site Health Reviews for Mining and Oil & Gas companies in several countries within Africa and South America and has set up and managed medical services of onshore and offshore projects for Mining and Oil & Gas companies in several countries within North America. Central America, The Caribbean and South America.



Dr Humberto MartínezMedical Director, Occupational
Health, International SOS

Dr Humberto Martínez is a Medicine Doctor with a Master of Science in Occupational Health, Fellow of the National Board of Occupational Medicine with a specialization in the are and Master of Public Administration by the National Autonomous University of Mexico (UNAM). Also, is member of the International Conference of Occupational Health and member of the Committee of Experts at the International Labour Office (ILO) in Geneva by the International Employer Organization (IEO). Vice President of the Health Council from the Employer National Conference of Mexico (COPARMEX). He has great experience with more than hundred corporate and large companies in México as consultant and assessment manager in occupational health. Actually he is the General Manager of MEDICS GROUP.



Gabriela Troncoso Alarcón EEHS Regulatory Consultant, Enhesa

Mrs Troncoso is a Senior Regulatory Consultant at Enhesa in Brussels. She has sound knowledge in regulatory compliance affairs, since she worked as an in house lawyer in Mexico. As an in house lawyer, she has faced occupational health and safety as well as environmental inspections conducted by federal and local authorities in Mexico. She specialises in Mexican EHS law and is responsible for monitoring EHS developments in Mexico and other Latin-American countries. She has also experience in managing audits in different jurisdictions (France, China, and Brazil). She holds a master degree in Law from Xochicalco University, and a master degree in Globalisation and Law from Maastricht University. She is fluent in Spanish, English, and French.

SPECIAL MENTIONS

Nancy Arriola, Regulatory Consultant, Enhesa

Jimena Murillo Chávarro, Regulatory Consultant, Enhesa

MEXICO CITY OFFICE Rubén Darío 281 Miguel Hidalgo Bosque de Chapultepec 11580 Mexico City, D.F

Tel: +5255 5000 1700

PHILADELPHIA ASSISTANCE CENTER 3600 Horizon Blvd #300 Trevose, Pennsylvania 19053

Tel: +1 215 942 8226

internationalsos.com enhesa.com