

ORC HSE OSHA WHITE PAPER

INTRODUCTION

It has been 50 years since the Occupational Safety and Health (OSH) Act of 1970 established the Occupational Safety and Health Administration (OSHA) and its mission to assure safe and healthful working conditions for Americans. During the past five decades, OSHA has significantly reduced risk for many key hazards, and the agency and OSHA staff deserve credit for that important work. However, times have changed, the workforce has changed, the nature of work has changed, and the OSHA model has not kept pace with those developments.

OSHA continues to follow the enforcement-based model first developed in the early 1970s. Back then, the work environment was largely industrial and geared heavily toward manufacturing and construction. Consequently, OSHA focused on basic safety concerns. OSHA did not inspect nursing homes, hospitals, or health care facilities, nor did it address issues like infectious disease or ergonomics. Issues like robotics and reliance on contract and contingent labor had not yet surfaced.

The safety and health profession has been able to adapt to most of those changes. Unfortunately, OSHA has not, and instead remains hamstrung by a model that is stagnant, largely due to the dynamics of the regulatory process and the increasingly contentious political environment at the federal level.

This paper provides specific suggestions for improving OSHA's operations. At the outset, we acknowledge that our own beliefs and actions as safety and health professionals have sometimes added to the agency's stagnation.

The thoughts that follow are offered in respectful support of the safety and health mission and the people in our profession who have dedicated their careers to protecting workers.

This paper is grounded in the following beliefs and assumptions held by ORC HSE, a National Safety Council Workplace Safety Group:

1. Strong, vigorous enforcement of occupational safety and health regulations will always be needed. (Hopefully, the regulations OSHA enforces will be well-crafted and reflect the input of business, labor and thought leaders in our profession.) Most employers want to ensure that their workers are protected. We believe only a small proportion of employers intentionally ignore and disregard employee health and safety. However, business pressures can drive some organizations to cut corners, actions that often violate safety rules and put workers at risk. Recalcitrant employers and those that take risk-producing shortcuts must be held accountable for their actions. OSHA should continue to pursue those employers with well-targeted actions that do not punish or alienate employers who are doing the right things.

2. OSHA operates within tight budgetary constraints and a political climate in Washington that is likely to be an obstacle to change. So, attempting to change the fundamental underpinnings of the agency, such as amending the OSH Act, is probably ill-advised at this time, although for some issues it might be the clearest solution. While the legal requirements in the OSH Act, coupled with the Administrative Procedures Act and other government regulations, significantly limit OSHA's flexibility, OSHA policies and procedures can and should be adjusted and improved to increase effectiveness.
3. We have deep respect for the career professionals at OSHA. Few would argue, given the current model, that OSHA has the necessary resources to adequately address its broad mandate. The following critique of the current OSHA model and suggestions for improvement are not meant to discredit the outstanding safety and health professionals who work there. **Also, these comments should not be used to justify cuts to the agency's budget, which, most would agree, is already too small.**

The opinions expressed in this paper are solely those of ORC HSE and do not reflect the opinions of individual NSC or ORC HSE member companies. We are dedicated to the proposition that ensuring worker safety and health is of mutual benefit to industry, labor and government.

EXECUTIVE SUMMARY

In the years since the passage of the OSH Act, OSHA has made a significant difference in the safety, health and wellbeing of American workers. However, OSHA's approach to prevention has not kept pace with significant changes that have taken place in the workplace. As a result, OSHA no longer leads the safety and health profession. We believe that the time for reassessing the OSHA model is long overdue.

This paper identifies 11 specific areas where OSHA could improve its effectiveness. Suggesting change in the abstract is easy; charting a viable new path forward requires rethinking 50-year-old practices and recognizing and addressing key barriers to change. Recommendations for those areas are summarized below:

1. **OSHA Leadership:** OSHA remains positioned to be the leading organization in worker safety and health; it is time for the agency to step up, reclaim, and embrace that role. However, to do that, OSHA will need to rework its decades-old approach for accomplishing its mission. OSHA's focus (and that of the safety and health community) must evolve from tracking failure and emphasizing strict compliance and punishment to an emphasis on risk reduction, fueled by increased collaboration and shared learning. In addition, the competency of OSHA staff, especially field staff that interact with OSHA's "customers," needs to be bolstered through better training and improved retention.

2. **Setting and Interpreting Standards and Guidance:** The OSHA rulemaking process is cumbersome, time-consuming, expensive, and frequently results in years of costly litigation. OSHA should move toward more collaborative processes whenever possible, such as negotiated rulemaking. In addition, rulemaking and guidance development should continue to move away from specification standards toward risk-based performance standards as one way to keep up with rapidly changing technology and management practice.

Guidance documents are important and should be strengthened through collaborative approaches that leverage the insights of a wide range of stakeholders with diverse interests. Development of guidance documents should be coordinated with OSHA's Advisory Committees.

The agency should issue an emergency temporary standard (ETS) for infectious disease, followed by an infectious disease standard.

OSHA should also focus on updating its existing standards, such as lockout and tagout (LOTO), process safety management and combustible liquids.

3. **Permissible Exposure Limits (PELs):** OSHA should resolve the decades-old problem with setting PELs by issuing a performance-based standard that requires manufacturers, at the time products are introduced into the marketplace, to provide criteria for safe worker exposure, based on a good faith and reasonable interpretation of the science. Manufacturers are already doing these assessments for customers. In most cases, it would not be too big a stretch to expand the assessments to workers, who have different but related exposure issues. Also, to reduce the burden of this requirement and promote consistency in employer risk criteria, OSHA should work with the National Institute for Occupational Safety and Health (NIOSH) and explore the use of NIOSH exposure bands or a derivative of that approach.
4. **OSHA Enforcement:** OSHA should adopt a more integrated, risk-based approach to prevention that starts out with a collaborative tone instead of an adversarial one. The approach should include initially working with employers to address hazards and reduce risks posing the greatest dangers to workers. Enforcement actions should be reserved for those sites unwilling to take reasonable steps to protect their workforce, and/or "bad actors" who simply refuse to comply with the law. "Strict compliance" should be replaced with "meaningful compliance" that moves away from nitpicking technical violations, such as cracked switch plates, to violations that pose a real risk to workers.

To effect this change, scarce OSHA resources (training, compliance assistance, consultation, enforcement, etc.) should be integrated and deployed in a comprehensive, phased approach designed to achieve the dual objectives of better management of serious hazards and reduction of the associated risk.

The use of press releases to shame employers into compliance should be rethought, and at a minimum their issuance should be held back until there is a final determination of the case. Press releases should also be issued to highlight success stories and S&H initiatives that add value to the business.

5. Data Needed to Improve OSHA Targeting and Other Prevention Efforts:

OSHA's scarce resources should be targeted where they are most needed. Resources should be allocated according to relative risk – to sites and industries with hazards that have high severity potential and to sites that struggle with managing risk.

Targeting should be based on an accurate assessment of the relative risk: the potential severity of the hazard, the magnitude of exposure (number of workers exposed and duration of exposure), and the likelihood of injury or illness as determined by the type, strength, and health of controls in place.

To accomplish these objectives, better data are needed to understand risk and to drive and assess safety and health programs in a more informed way. OSHA should collaborate with NIOSH, the Bureau of Labor Statistics (BLS), workers, insurers and others in the regulated community to build a risk-based targeting system and to assemble and improve the data needed to support that system.

A top priority should be improving the accuracy and usefulness of OSHA data. Even if improved, OSHA data should be supplemented with data capable of providing needed insights into serious hazards and how best to address them. Other data sources, such as the ASTM E2920 - 19 Global Standard on Reporting Injuries and Illnesses should be evaluated for potential analysis and use. The use of leading indicators should be more fully explored and promoted. And OSHA should support data generation that demonstrates the value that worker safety and health programs bring to businesses, not only as a moral imperative, but as a business enabler and key contributor to profitability.

6. Occupational Illness and Disease: It is hard to believe that five decades after the passage of the OSH Act, reliable data on occupational disease are nearly nonexistent. There is not even an agreed-upon count of work-related health conditions. OSHA records provide little insight since they are limited to tracking occupational disease incidence, which is rarely available to employers. Although select diseases have been studied during the development of certain OSHA health standards, there is generally very little known about the work connection for many disease types.

Prevalence data for certain disease categories by industry and occupation should be gathered routinely. Such data could be obtained through household surveys, by adding chemically related occupational exposure and disease categories to the list of Notifiable Diseases and Conditions reportable to the Centers for Disease Control and Prevention (CDC), and by adding industry and occupation codes to electronic health

records. Once obtained, prevalence data can be used to target follow-back surveys and other forms of surveillance and research.

OSHA should make the creation and analysis of these data a priority, and should work with NIOSH, CDC, BLS, insurers, and others in the safety and health profession to fill this glaring gap.

7. **Cooperative Programs and Training and Education:** OSHA cooperative programs have historically been underutilized and not treated within the agency as an equal partner to compliance in injury and illness prevention. As a result, they are routinely underfunded and understaffed. Furthermore, the scarce cooperative program resources that do exist are not deployed strategically. The programs are there for the asking; for the most part OSHA does not differentiate among those requesting services based on need or the severity of the hazard(s) they are trying to manage.

OSHA's cooperative programs should be leveraged and their role in injury and illness prevention expanded. They are a cost-effective means for driving change and improving worker protection. As mentioned previously, cooperative programs should be integrated with enforcement into a comprehensive agency approach targeted at sites and processes with the most serious hazards and the highest degree of risk.

Training and education are important tools that can have an important impact on employers' and workers' ability to identify hazards and mitigate the risk. They are also critical to maintaining the competency of OSHA staff and to the agency's ability to effectively administer its programs. OSHA should provide oversight of agency training and education programs to promote consistency and clarity. The agency should also collaborate with groups in and outside of government, including employers and worker representatives, to provide the best content. Technology should be leveraged to extend OSHA's reach to small and mid-sized businesses.

8. **Research:** OSHA must take steps to better utilize its relationship with NIOSH. NIOSH has met many of the research needs associated with worker protection, such as focusing on new and emerging hazards, addressing construction safety and health issues, and developing and analyzing injury and illness data. However, NIOSH operates as a separate entity rather than as a supportive research arm for OSHA. Both NIOSH and OSHA could improve their effectiveness by strengthening their partnership and enhancing their collaboration. For example, the two agencies could deploy their joint resources on such issues as serious injury and illness prevention and human and organizational performance.
9. **Safety and Health Programs:** Safety and health programs have been used by companies for years as an effective means for translating S&H policies and programs into action. OSHA should create a performance-based safety and health

program standard that requires companies to adopt key elements of a safety and health management system. Compliance should be kept flexible, and the requirement should be simple and easy to understand and implement. Companies should be allowed to meet this standard by complying with one of the existing consensus standards or by developing their own management system elements that mirror the key elements of those standards.

Since company risk profiles differ, their management system needs are likely to differ. Consequently, a one-size-fits-all approach will not work. Agency enforcement staff expertise will need to grow to enable them to make an informed judgment on whether a particular management system and associated risk management is effective in a given work environment.

10. **The S&H Business Case:** Knowing the technical solutions to safety and health challenges is only half of the equation. Those solutions have limited benefit unless our professionals are empowered to use them. In many companies, safety and health programs and policies are perceived as costs to be minimized, not as opportunities for investment that can lead to better business metrics on productivity, product quality, employee engagement and profitability. As a result, safety and health professionals often find it an uphill battle to get their leadership to make needed safety and health investments.

Some employers tend to focus more on safety and health issues after a catastrophic event. This could be different if OSHA painted a more accurate picture of the business value of safe and healthful operations. Many of the systems and approaches critical to worker protection are also key to maintaining effective processes, productivity and product quality. The business value of worker protection, above and beyond its moral necessity, can be demonstrated.

11. **Innovation:** The safety and health profession is undergoing a renaissance in thinking, driven in part by the increasing pace of change and growing complexity of business operations. To maintain its relevance, OSHA needs an institutional means for keeping pace with these developments.

Todd Conklin, a noted author on human and organizational performance (HOP), has suggested that OSHA establish an Office of Innovation. We agree with him. The office could address issues such as the role of worker safety and health in corporate social responsibility (currently referred to CSR or ESG), total worker health and wellness, human and organizational performance, and high reliability organizations. Staying abreast of these and other developments is critical to OSHA maintaining its relevance in the 21st century.

SPECIFIC CHALLENGES AND RECOMMENDATIONS

Details on the challenges facing OSHA are provided below, along with specific recommendations for meeting them.

1. OSHA Leadership

At one time, OSHA was the clear leader in workplace health and safety. That is no longer the case. The agency needs to regain that role. One key factor that has limited the agency's reach and tarnished its image and credibility has been its inability to adapt to the changing nature of work. That has been driven, at least in part, by relatively low OSHA budgets and the agency's inability to attract and retain top-tier staff. Following are a few specific recommendations:

- OSHA should leverage its position as the federal leader in workplace safety and health to convene collaborative dialogues, promote learning and work with industry, labor, equipment manufacturers, insurers, and others to develop strategies to prevent injury and illness, especially the most serious.
- OSHA needs to revitalize its advisory committees and use them to provide guidance, information and recommendations on special issues such as the use of PELs, methods to target high-risk employers for inspection, occupational disease, priorities in setting or fixing standards, etc. OSHA should also call on other stakeholders – unions, trade groups, professional associations, and employer organizations – for input and guidance.
- OSHA should establish working relationships with professional associations like ASSP and AIHA, thought leaders, insurers, and colleges/universities to design a more effective curriculum framework for both certificate and degree programs. This will help to ensure that the next generation of S&H professionals receives the high-quality training needed to prepare them for tomorrow's S&H challenges.
- Steps should be taken to depoliticize the agency. OSHA needs to minimize the impact that changing administrations have on agency operations by consistently maintaining a balanced approach and engaging in a meaningful way with organized labor and employer organizations. Worker safety and health should be one area where different workplace perspectives can find common ground.
- Each year the OSHA assistant secretary and key executive staff have an abundance of opportunities to speak before businesses, labor organizations and trade associations. But many of these opportunities to influence change are lost. Rather than seeking to create a vision of excellence, inspire stakeholder participation and change the agency's image from one that is out of touch to one that is driving true S&H improvements, these opportunities are frequently used to justify OSHA's role as an enforcer.

- OSHA efforts must become less focused on punishment and more focused on risk mitigation, using all the tools at its disposal to identify and address hazards with serious injury and illness potential.
- If OSHA’s image is to evolve from the “cop on the beat” to the leader in professional safety and health, the agency must change how it inspects workplaces, focusing on hazards and violations that have serious consequences.
- Some compliance officers have extremely valuable safety and health knowledge gained through experience conducting hundreds of inspections with companies on a variety of safety and health issues. These compliance officers should be encouraged to share this information with employers whenever feasible. They should also be tasked with mentoring new compliance personnel.
- Other compliance officers lack the knowledge and experience to effectively do their jobs. Except in a compliance officer shortage scenario, compliance officers should not be sent into facilities unless they have the necessary training and experience.
 - A common criticism is that OSHA compliance officers are often unprepared to do inspections at sites they visit. For example, an ORC HSE member’s chemical plant recently reported that it was inspected by a compliance officer that previously had only done nursing home inspections. The compliance officer had absolutely no knowledge of a chemical plant.
 - Too many times, OSHA loses cases in court or through the settlement process due to improper citation of the standards and regulations. In many cases, this is due to inadequately trained compliance officers or a compliance officer’s unfamiliarity with the industry being inspected.
 - OSHA compliance officers should receive industry-specific training so that they understand the industries they are assigned to inspect.
 - OSHA area offices might consider taking stock of the industries and businesses within their jurisdiction and, when hiring new compliance officers, focus on applicants with experience in those industries.
 - Inspectors need professional development in both technical issues and people skills.
 - Professional certification in safety and/or health should be required for compliance officers within five years of being hired.
- OSHA Voluntary Protection Program (VPP) Safety and Health Achievement Recognition Program (SHARP) sites can be used to mentor and train compliance officers on industry-specific hazards.
- Keeping well-trained compliance officers and field staff is a key to maintaining OSHA’s credibility. Retention of those employees should be a priority, and issues like compensation and career development should be studied.

2. Setting Standards

The late Joe Dear, a past OSHA assistant secretary, once said that regulations are needed to protect those who can't protect themselves. While OSHA standards and regulations don't necessarily result in performance excellence, they do set a floor for basic worker protection. Therefore, having an effective and efficient rulemaking process is critical. Unfortunately, the current rulemaking process is lengthy, inefficient, costly and broken. Some areas to focus on include:

- OSHA, workers, and others in the regulated community together should explore alternative approaches to promulgating rules. The current process seldom results in agreement among the interested parties. Years of development and promulgation often result in additional years of protracted litigation. OSHA should change its approach to developing standards by moving away from specification standards to risk-based, performance standards.
 - Specification standards are often inadequate to address all the risks and fail to encompass mitigation strategies available to address those risks, a problem that will likely increase as technological advances accelerate. Performance-oriented standards offer OSHA a viable option in many circumstances.
 - OSHA should also consider alternatives to the traditional standard-setting process, such as leveraging consensus standards or using negotiated rulemaking. Negotiated rulemaking is not the sole solution and would not be appropriate for every standard. Its use on occasion, however, would signal a shift toward a more collaborative approach to the regulated community.
 - One example of an innovative approach is found in the aviation industry. The Commercial Aviation Safety Team (CAST), founded in 1998, has developed “an integrated, data-driven strategy to reduce the commercial aviation fatality risk in the United States and promote new government and industry safety initiatives throughout the world.” Key stakeholders are brought together to develop joint solutions to common problems. Representatives from government, labor and business, including airplane manufacturers, are part of the process, and therefore feel they are part of the solution and have a stake in the findings. The CAST approach has been credited with resulting in less-entrenched opposition and, more importantly, improved overall safety performance throughout the aviation industry.
 - Policies and procedures should not be developed in a vacuum since they represent the agency's official interpretation of the rules. Whenever possible, OSHA should also use the consensus-building process for developing them. Also, the agency should increase the use of interpretation letters and guidance documents to help explain

the regulatory requirements. These need to be issued on a timely basis.

The COVID-19 pandemic will likely not be the last pandemic crisis this nation will face. OSHA should publish an emergency temporary standard (ETS) for infectious disease to meet the immediate needs resulting from the COVID-19 pandemic, followed by formal rulemaking on an infectious disease standard.

- The current OSHA standards were mostly adopted from consensus standards of the 1950s and 1960s. Many are out of date. The agency should focus on updating and fixing these standards and regulations, which in many cases could be done by adopting the most current consensus standards.

3. Permissible Exposure Limits (PELs)

The PELs court decision from the late 1980s, coupled with a lack of agency resources needed to keep pace with the rapid introduction of new chemicals, makes it impractical for OSHA to effectively update PELs on a chemical-by-chemical basis. However, it would be doable for OSHA to issue a performance-based standard requiring manufacturers to take reasonable steps to establish criteria for safe work exposure to their products prior to introducing them. At that stage, manufacturers will already be assessing exposure data for their customers. And while the worker exposure is different, it is related and could be addressed at the same time. No other entity is better situated to make that determination. This new approach could be modeled after aspects of the European Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) or the new chemical exposure limits under the Toxic Substances Control Act (TSCA).

- Determining safe exposure for workers could be done in a way that is not overly burdensome and that would promote consistency in employer risk criteria. For example, manufacturers could use exposure bands like those currently recommended by NIOSH. OSHA should work with NIOSH to explore the use of NIOSH exposure bands or some derivative of that approach.
- In the meantime, as this new system is being established, OSHA should develop clear and concise guidance on use of the General Duty Clause (Section 5(a)(1) of the OSH Act) for citing employers for excess chemical exposures.

4. OSHA Enforcement

The purpose of OSHA inspections is to ensure compliance with OSHA standards and regulatory requirements, and where those requirements are lacking, to ensure reasonable protections are in place under the General Duty Clause. Historically, OSHA enforcement activities have played a critical role in reducing certain kinds of injuries and illnesses, and ORC HSE believes that enforcement will remain a

necessary and important part of the OSHA model. However, the agency's current approach to enforcement is costly, time-consuming, largely ineffective and out of date.

OSHA should adopt a more integrated, risk-based approach that promotes collaboration and shared learning, and is focused on addressing hazards that pose the greatest risks to workers.

- The strict compliance model – conducting on-site inspections, issuing citations, holding formal and informal conferences, and in some cases litigating the results – is a very expensive and time-consuming way to initiate change and address risk. Punishment may affect short-term behavior, but lasting change is better achieved by transforming beliefs through education and increased understanding. These changes can also be attained through tools such as training, consultation, and compliance assistance.

Years ago, OSHA piloted a program known as the Maine 200, in which the agency used data and information to identify hazards at individual worksites. Initially, consultation and compliance assistance were offered to help those sites reduce the risk. Enforcement was used in the Maine program as a last step for sites that refused to address their hazards and for those establishments declining to participate in the program. While some aspects of the program were ultimately challenged in court, the principles of combining OSHA's resources into an integrated approach and targeting them where they are most needed continues to make sense. OSHA should take those principles and redesign its programs accordingly.

Consequently, cooperative programs should be combined with enforcement into a more coordinated agency inspection approach that is focused more on reducing risk than on punishment. Stand-alone enforcement actions would still be directed at the “bad actors” – those employers who refuse to comply with the law and/or take reasonable steps to protect their workforce. For other employers who want to do the right thing (and may or may not know how to do it), compliance assistance and cooperative efforts would be used, with enforcement still available as a last step when needed. Lessons learned from VPP programs could be harnessed for this new approach.

To be perceived as fair and reasonable, citations and penalties should be limited to serious hazards that matter: those hazards where there is a high risk of serious injury/illness or fatality. OSHA should stop issuing citations for trivial technical violations, such as a cracked electrical outlet cover, and instead address most of the non-serious issues by advising employers on what they need to correct. The agency could establish an advisory group to develop a list of examples of violations that would not be cited.

- Press releases about enforcement actions are often published too soon following the issuance of citations. In many cases, the citations are later rescinded, or the agency enters into a significant settlement agreement that decreases the violation classification, without a correction ever being issued. These press releases should be postponed until after the case is settled so they reflect the true outcome of the case.

5. Data Needed to Improve OSHA Targeting and Other Prevention Efforts:

OSHA clearly lacks the resources needed to visit all workplaces regularly, so the agency must deploy its scarce resources where they will do the most good. Current targeting is imprecise and largely driven by data with serious limitations. Inspections are currently directed toward sites OSHA believes have hazards based on National and Local Emphasis Programs, accidents, employee complaints, referrals, and past OSHA injury and illness rates. Consultation services are made available upon request.

- OSHA should target its efforts (enforcement, consultation, and training) in a coordinated fashion to the industries, companies, sites and processes that have risk from hazards with high severity potential. Targeting should be based on accurate assessment of the relative risk: the potential severity of the hazard, the magnitude of exposure (number of workers exposed and duration of exposure), and the likelihood of injury or illness as determined by the type, strength and health of controls in place.
- OSHA should work with NIOSH and BLS to develop and refine the risk-based targeting system.
- In the interim, OSHA could also create a risk profile of priority sites and processes by identifying those that involve well-known serious hazards and refining the agency's selection process. This can be done by cross-referencing the hazard data with aggregated inspection findings for each related industry, and utilizing inspection profiles for companies and/or sites in those industries. A broad range of agency programs could then be deployed to assist employers in addressing those risks, with scarce compliance resources deployed where they are most needed. Progress could be measured by what was done or not done at those sites (leading indicators) and the resulting impact on outcomes.
- While the agency has implemented an inspection weighting system to help focus compliance efforts in areas with severe injury and illness potential, the system should be refined to better direct that focus by removing non-formal complaints from the weighting system.
- We believe that an improved targeting system for health inspections should also be developed through working with NIOSH, BLS and others.
- In addition to improving its own data use, OSHA should encourage industry to use data in a more informed way to drive and assess safety and health efforts. Improving prevention requires a shift away from tracking failures and over-reliance on OSHA data toward learning from successes and using more proactive data. Leading indicators provide critical insights into prevention efforts in terms of

what is being done, how well efforts are being executed, and whether key assumptions about processes, hazards, and controls are valid.

- Leading indicators alone do not provide a complete picture. Outcome data are essential to understanding if prevention efforts are having their desired effect. So, it is critical that OSHA improve the quality of its own data. Simply put, OSHA should modernize its recordkeeping and reporting system to provide more consistent and useful data. Employers generally tend to provide data if they: a) understand what is being asked of them; b) think the requirements are fair; and c) feel they are getting some value in return for their efforts. The OSHA data system fails on all three counts.
- Current data on occupational injuries and illnesses are limited and do not meet the needs of OSHA or the safety and health profession. OSHA relies heavily on the injury and illness data that employers record on OSHA logs. Consequently, many companies use OSHA injury and illness rates as their primary and often sole metric to drive and assess their safety and health performance.
 - Some companies even tie OSHA metrics to variable compensation programs, intending to promote improvement. This often puts pressure on the OSHA data by creating an incentive to keep cases off the OSHA log, leading to underreporting and inaccurate injury and illness rates.
 - Regrettably, OSHA data are subject to wide variability and do not accurately reflect safety and health performance, nor do they provide real insight into the magnitude of occupational disease. They include relatively minor cases and some cases with little real connection to the workplace.
 - An important first step toward improving OSHA data is for the agency to abandon the collection and publication of site-specific injury and illness data and focus on other, more productive data efforts. Although transparency has potential benefits, an unintended consequence of publishing the OSHA data will be strong pressure at some sites (possibly some of the most hazardous) to avoid recording cases – the antithesis of what is needed to promote awareness and learning. Further, with the recent overturning of an OSHA regulation designed to nullify the Court’s decision in the *Volks* case, it has become increasingly difficult, if not impossible, for the Agency to enforce the OSHA recordkeeping requirements and validate the OSHA records. (*Volks* applies the six-month statute of limitations in the OSH Act to recordkeeping violations.)
 - ORC HSE continues to advocate a three-step solution for improving OSHA data quality:
 - i. Remove the few “lightning rod” interpretations that provide the agency with little additional information but undermine agency credibility and consistently inflame the regulated community. An example is the interpretation dealing with an employee experiencing acute back pain at work as a result of sneezing due to a common cold unrelated to work.
 - ii. Develop useful decision-making software to assist users in making accurate recordkeeping decisions. The current OSHA

software does little more than summarize the text in the regulations. What is needed is software that employers can use to correctly answer their “what if” questions.

- iii. Implement a cooperative compliance approach that would encourage employers to use the software. For example, if employers demonstrate that they are using OSHA’s software to make recordkeeping determinations, the agency could offer to forgo a full records review when auditing their OSHA records, and instead audit to determine if they were using the software and using it correctly.
- In addition, OSHA should explore using additional outcome data. The criteria defined in the ASTM (American Society for Testing and Materials) E2920 - 19 Global Standard on Reporting Injuries and Illnesses can be used to track the more serious cases. The standard uses a subset of the OSHA data to capture cases with closer ties to the workplace that have the most serious impact on workers. ORC HSE played a major role in developing the ASTM standard because member companies with global operations felt that data based on OSHA definitions do not meet their requirements for consistent data worldwide and because serious cases were being lost and overlooked in the OSHA data.
 - The ASTM E2920 - 19 data are not a substitute for the OSHA data. Therefore, the quality and consistency of OSHA data must also be improved.

6. Occupational Illness and Disease

Much has been written about occupational disease over the past 50 years. And certain disease types have been studied as part of the standards development process for certain exposures. But truth be told, there has actually been very little activity over the last 50 years to address work-related illnesses and occupational disease.

There is no agreed-upon count of occupational illness and disease, and very little is known about the work connection for many disease types. The safety and health profession should work with OSHA, NIOSH, CDC and others to characterize the prevalence of occupational disease. More than five decades after the passage of the OSH Act, reliable data on occupational disease are nearly nonexistent. OSHA records focus on tracking occupational disease incidence, which is rarely available to employers.

Prevalence data for certain disease categories by industry and occupation should be gathered routinely. Such data could be obtained through household surveys, by adding chemically related occupational exposure and disease categories to the list of notifiable diseases and conditions reportable to CDC, and by eventually adding industry and occupation codes to electronic health records. Once obtained, prevalence data can be used to target follow-back surveys and other forms of surveillance and research that

would shed light on issues such as how different illnesses occur, how risk assessment can more accurately identify health risks, and how interventions can best be constructed and targeted.

7. Cooperative Programs and Training and Education

OSHA cooperative programs are currently underutilized. They are consistently underfunded and understaffed and are not considered an equal partner to compliance programs in OSHA's overall injury and illness prevention strategy. In addition, the scarce cooperative program resources that do exist are not deployed strategically. The programs are there for the asking. For the most part, OSHA does not differentiate among those requesting services based on need or the severity of the hazard(s) they are trying to manage.

OSHA's cooperative programs are a cost-effective means for driving change and improving worker protection. They should be leveraged and their role in injury and illness prevention expanded.

- As mentioned previously, in addition to their current use, cooperative programs should be integrated with enforcement into a comprehensive Agency approach targeted at sites and processes with the most serious hazards and the highest degree of risk.
- That said, cooperative programs – including Voluntary Protection Programs (VPPs), partnerships, and alliances – need an overhaul. For example, VPPs are stagnant, companies are dropping out, and some applicants have waited over five years for approval. Professional and employer associations should be allowed to partner with the agency, and the VPP process should be streamlined and made consistent among all OSHA regions.
- The consultation program provides a needed service to small employers and should be expanded.
- OSHA should expand partnering with “good” companies to extend outreach and information. VPPs have not been utilized as much as in previous years; this is a lost resource to the agency and should be revitalized.
- The agency should also expand the use of partnerships, VPPs and compliance assistance to employers that want to improve employee health and safety but either lack resources or are unsure of how to proceed.
- OSHA should make use of the expertise of VPP auditors and expand the Special Government Employee (SGE) force to help OSHA provide assistance and guidance to those employers needing such help.
- OSHA's VPP and SHARP programs both focus on and highlight employer excellence in safety and health. The process to qualify for SHARP is like that for VPP. OSHA does not have the budget or resources to carry two programs that are essentially the same. To improve efficiency and reduce costs, these programs should be combined so that resources from OSHA – the OSHA Consultation

Service and the VPP SGEs – can all be used together to assist employers. We suggest dropping the SHARP designation and allowing the Consultation Programs to approve establishments for the VPP.

- Training and education are important tools that can have a significant impact on employers' and workers' ability to identify hazards and mitigate risk. They are also critical to maintaining the agency's ability to effectively administer its programs.
 - Consistency of training across all OSHA regions must be established. Currently, each region trains its compliance officers and conducts outreach training without direct input from the OSHA national office and other regions. The OSHA Training Institute should take the lead on both compliance officer training and stakeholder training.
 - OSHA should partner with some of the “good” companies to develop and extend outreach and information. Use of VPP SGEs is a good example of that kind of cooperation.
 - OSHA can also leverage technology to do more educational outreach to small and mid-sized companies with known hazards. For example, plumbing companies around the country could be targeted with a campaign about the hazards of trench collapses. OSHA can start creating and posting YouTube videos on ways to correct hazards such as machine guarding, LOTO, using local exhaust ventilation and so forth.

8. Research

OSHA must make better use of its relationship with NIOSH. NIOSH has met many of the research needs associated with worker protection, such as focusing on new and emerging hazards, addressing construction safety and health issues, and developing and analyzing injury and illness data. However, NIOSH operates as a separate entity rather than as a supportive research arm for OSHA. Both NIOSH and OSHA could improve their effectiveness by strengthening their partnership and cooperation. For example, the two agencies could deploy their joint resources on issues such as serious injury and illness prevention and human and organizational performance.

Simply put, OSHA does not have the bandwidth to drive the S&H research that is needed, and all too frequently is forced to focus on the issue of the day, either driven by politics or by some catastrophic event that garners public attention. NIOSH has been buffered from much of the political ebb and flow of Washington that sometimes affects the OSHA agenda. Increased collaboration between the two agencies may not only further needed research, it may also contribute to increased stability of some aspects of worker protection. Furthermore, the NIOSH mission of conducting research, promoting worker safety and health through capacity building, and leveraging collaborations fills gaps in the OSHA arsenal – gaps that are due in part to a lack of necessary funding.

9. Safety and Health Programs

OSHA should drive the profession to promote key safety and health program elements. An effective safety and health program is basic to prevention. OSHA should promulgate a performance-based standard that requires adoption of key elements of a safety and health management system. Compliance should be kept flexible, and the requirement should be simple and relatively easy to understand and implement, especially for employers with small and mid-sized businesses. Employers could meet the standard by conforming to one of the recognized safety and health consensus standards or by creating their own safety and health management systems.

- The Recommended Practices for Safety and Health Programs, released by OSHA in October 2016, could serve as the basis for a performance-based standard that is focused on key core elements. ANSI Z10 and the new ISO 45001 also can be used to guide OSHA in the development of its safety and health management system standard.
- Since company risk profiles differ, their management system needs will differ. Consequently, a one-size-fits-all approach will not work. Enforcement staff expertise will need to grow to enable them to make an informed judgment of whether or not a particular management system, and associated risk management is effective in a given work environment.

10. The S&H Business Case

Knowing the technical solutions to safety and health challenges is only half of the equation. Those solutions have limited benefit unless safety and health professionals, operators, supervisors and managers are empowered to use them. In many companies, safety and health programs and policies are perceived as costs to be minimized, rather than as opportunities for investment that can lead to better metrics for productivity, product quality, employee engagement and profitability.

- Some employers tend to focus more on safety and health issues after a catastrophic event. This could be different if OSHA painted a more accurate picture of the business value of safe and healthful operations. Many of the systems and approaches critical to worker protection are also key to maintaining effective processes, productivity and product quality. The business value of worker protection, above and beyond its moral necessity, can be demonstrated.
- Years ago, ORC HSE and its member companies developed a tool to evaluate and capture the business value of different safety and health initiatives. The ROHSEI tool (Return on Health, Safety, and Environmental Investments) facilitates the calculation of business measures such as ROI (return on investment) and NPV (net present value).
- Looking at it differently, ORC HSE developed another tool years ago to demonstrate the value that industrial hygiene brings to the business, tying the

accomplishment of hygiene initiatives to goals and objectives for the overall business. This approach could be expanded to incorporate safety and other health-related issues.

- OSHA, NIOSH and the U.S. Chemical Safety Board all have undertaken efforts to make some aspect of the value case. Clearly, more work is needed.

11. **Innovation:** The safety and health profession is undergoing a renaissance in thinking. This is driven in part by the increasing pace of change and growing complexity of business operations. To maintain its relevance, OSHA needs an institutional means for keeping pace with these developments.

Todd Conklin, a noted author on Human and Organizational Performance, has suggested that OSHA establish an Office of Innovation. We agree. The office could address issues such as the role of worker safety and health in a host of developing issues, including:

- *Corporate Social Responsibility (currently referred to CSR or ESG):* Increased customer interest and the focus on attracting and retaining the next generation of highly skilled workers is driving more and more companies to recognize the value of being socially responsible. The Business Roundtable has gone on record as stating that the focus of companies should shift from shareholders to stakeholders. So, there is growing pressure on environmental, social and governance (ESG) factors as ways to evaluate business performance. Worker safety and health is a key component of the social element. It would be hard for companies to make the case that they are socially responsible if they do not take steps to ensure safe and healthful working conditions internally and in their supply chain. OSHA should leverage this connection to promote the safety and health mission.
- *Total Worker Health and Wellness (TWH):* Evidence suggests that risk factors in the workplace can contribute to health problems previously considered unrelated to work. At its core, TWH programs aim to improve worker wellbeing by improving the design of work and employment conditions in a way that will prioritize safety and health, and improve physical and psychological wellbeing. OSHA should leverage the good work of NIOSH and others in this area to further its mission.
- *Psychosocial Issues Associated with Worker Safety and Health:* Europe is clearly ahead of the U.S. in addressing psychosocial issues, and some global companies are beginning to embrace this approach. Psychosocial risks arise from poor work design, organization and management as well as a poor social context of work. These risks may lead to negative psychological, physical and social results such as work-related stress, burnout or depression. There is research that even connects psychosocial factors to an increased risk and incidence of musculoskeletal disorders (MSDs). These are issues on the horizon that OSHA needs to understand and address.
- *HOP:* Human and organizational performance concepts are being adopted in a wide range of companies across multiple industries as a new and different way to

consider and drive worker safety and health. (ORC HSE recently hosted a HOP conference with over 750 attendees from six different continents.) These concepts are key to more effective prevention of fatal and serious injuries and illnesses. HOP recognizes that mistakes happen and are part of the human condition. HOP substitutes learning and collaboration for blame, celebrating and leveraging the knowledge of the frontline worker. HOP focuses on understanding the context in which work gets done, and on fixing systems instead of fixing people. The result is that companies adopting these concepts have a more sophisticated understanding of risk. OSHA needs to become well-versed in HOP for two reasons. There is growing adoption of HOP concepts in the regulated community, and more important, because understanding HOP is critical to improving prevention efforts.

- *High Reliability Organizations (HRO)*: Much has been written on the characteristics of highly reliable organizations. Karl Weick and Kathleen Sutcliff wrote a landmark book, *Managing the Unexpected*, which outlines key characteristics of organizations that are effective at limiting unexpected events and at managing them when they do occur. There is a body of thought around HRO concepts and how they can enhance organizational capabilities and organizational capacity to operate safely. OSHA should understand and leverage these concepts as additional tools to help accomplish its mission.

CONCLUSION

The late Dr. Wayne Lednar, a respected corporate physician at Kodak and later DuPont, once said that the goal of every business should be to have “healthy employees productively at work.” Effective safety and health programs and policies are keys to achieving that goal.

The purpose of this paper is to make the case that changes in safety and health approaches are needed at the federal level, and that with change, OSHA can and should resume its role as the leader of the safety and health profession.

While not addressed in this paper, an honest assessment also acknowledges that changes are needed in our profession and that some of flaws in OSHA’s approach, such as the agency’s reliance on inaccurate OSHA data, have been encouraged by the way safety and health professionals in the private sector operate.

This paper highlights key challenges facing the agency. More importantly, it also provides specific recommendations for moving forward. Some suggestions are largely transactional, while others represent a fundamental change in the way that OSHA does business.

These issues should not be considered in isolation, but rather addressed in an open dialogue that involves the full range of OSHA stakeholders. Consideration, refinement and implementation of these suggestions will take time. Therefore, priorities must be set.

The OSH Act authorizes the agency to bring together advisory committees for counsel on issues where the Secretary feels that input and advice is needed. We suggest that OSHA create a special advisory committee to consider many, if not all, of the issues that we and others have raised and charge it with offering recommendations to the Assistant Secretary for improving agency effectiveness. Through this special advisory committee, key stakeholders, including businesses, universities, trade and professional associations, and unions, can be engaged.

We consider it a privilege to be part of this profession and look forward to working with our colleagues in business, labor, government and academia to increase our learning and improve our collective ability to protect others.