The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Professionals (ASSP) as United States Technical Advisory Group (TAG) Administrator of the ISO TC283 or individual TAG members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this technical report, ASSP or the U.S. TAG for TC283 does not ensure that adherence to these recommendations will protect the safety or health of any persons or preserve property.
ASSP/ISO Technical Report


A Technical Report prepared by ASSP and registered with ANSI.

Registration Date:
May 12, 2024

American Society of Safety Professionals
520 N. Northwest Highway
Park Ridge, Illinois 60068
(847) 699-2929 • www.assp.org

Published May 2024

Copyright ©2024 by American Society of Safety Professionals
All Rights Reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America
Foreword

This ANSI registered Technical Report is designed to complement ISO 45001 by providing performance evaluation approaches that align with requirements of that standard. This document can be used independently, by any organization, to improve OH&S performance.

This technical report is nationally adopted and registered with ANSI and is an identical adoption of the ISO 45004:2024, titled “Occupational health and safety management – Guidelines on performance evaluation.”

We hope this technical report will support your organization’s effort in creating a safe workspace and help you reap the benefits offered by ISO 45001.

Publication of this technical report that has been registered with ANSI has been approved by the Accredited Standards Developer, American Society of Safety Professionals (ASSP), 520 N. Northwest Highway, Park Ridge, Illinois 60068. This document is registered as a Technical Report according to the “Procedures for the Registration of Technical Reports” with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to ASSP, 520 N. Northwest Highway, Park Ridge, Illinois 60068.

This document is registered as a Technical Report in the U.S. TAG for TC283 publications according to the Procedures for the Registration of ANSI Technical Reports and the ANSI/ASSP Safety Operating Procedures.

This technical report was processed and approved for submittal to ANSI by U.S. TAG for TC283. Approval of the technical report does not necessarily imply (nor is it required) that all committee members voted for its approval. At the time this technical report was registered, the U.S. TAG for TC283 had the following members:
<table>
<thead>
<tr>
<th>Organization Represented</th>
<th>Name of Representative(s)</th>
</tr>
</thead>
</table>
| AECOM                                          | Dana Mueller
|                                                | Jayce Galeazzi, CSP  |
| AIG                                            | George Alvisio, CSP   |
| AIHA                                           | Amina Deji-Logunleko  |
|                                                | Mark Drozdov, SME, MS, SSM, CUSP, CRA, CMA  |
| Aluminum Association                           | Bradley Wyatt, CSP, CMSE                                       |
|                                                | Curt Wells                                                     |
| American Society of Safety Professionals       | Kathy Seabrook, CSP, CFIOSH, FASSP, EurOSHM                    |
|                                                | C. Gary Lopez, MS, CSP, FASSP                                   |
| ANAB                                           | Tina Garner                                                   |
| AT Safety                                      | Amy Timmerman, CSP, CHES                                       |
| Banda Group International, LLC                 | Jake Shirley, CSP                                             |
|                                                | Zeferino Banda, Jr., CSP                                       |
| Booz Allen Hamilton                            | Kenneth Clayman, SMS                                           |
| Center for Professional Excellence in Risk &  | Ujwal Ritwik                                                  |
| Sustainability                                 | Sachin Desai                                                  |
| Clarion Safety Systems, LLC                    | Angela Lambert                                                |
|                                                | Ron Crawford                                                  |
| Compliance Management International            | Betsy Lovensheimer, CIH, CSP                                   |
|                                                | Todd Allshouse, CIH, CSP                                       |
| Concurrent Technologies Corporation            | Brandon Hody, MS, CSP, CHSP                                    |
|                                                | Lori Schroth, CSP, CIT, CHSP                                   |
| Dotson Group, LLC                              | Kyle Dotson, CIH, CSP, BCEE                                     |
|                                                | Alan Leibowitz, CIH, CSP                                       |
| Environmental Compliance Systems, Inc.         | Kevin Lehner                                                  |
|                                                | Jennifer Miller                                               |
| Fastenal Company                               | Randy Parnow                                                  |
|                                                | Brook Applequist                                              |
| Fxs Risk and Safety Consulting                 | Francis Sehn, CSP, ARM                                         |
| Icarus Environmental, Inc.                     | Michael Seymour, MS, MPH, CIH (ret.)                          |
| Ingeteam, Inc.                                 | Todd Grover                                                  |
|                                                | Eduardo Gutierrez                                             |
| Institute of Hazardous Materials Management   | Thomas Slavin, CIH, CSP, CSHM, CPEA                           |
|                                                | Gene Guilford                                                |
| IUE-CWA                                        | Debra Fisher, CSMP, CSHM                                       |
| Keystone Engineering Inc.                      | Josh Thibodeaux, MS, CSP, CET                                  |
Lamar University

Lockheed Martin Corporation

National Institute for Occupational Safety & Health
National Institute of Standards & Technology
National Safety Council
Omnex Engineering & Management, Inc.

Pfizer Inc.

Risk Control & Safety Consulting Services LLC

Safety Mentor, LLC

Siemens
Sixth Sense Safety Solutions
Specialty Technical Consultants, Inc.
TransReg LLC
U.S. Department of Labor – OSHA

United Steelworkers
Wheel Pros, LLC

Z10 Standards Committee

Observers and Non-Voting Members:
MiDOViA
MSC Industrial Supply Co.

April Haberman
Kim Hart
Robert Cookingham, II, CSP
Contents

Foreword ................................................................. iv
Introduction ................................................................ v
1 Scope ................................................................... 1
2 Normative references ............................................ 1
3 Terms and definitions ............................................. 1
4 Performance evaluation .......................................... 2
   4.1 General .......................................................... 2
   4.2 Why performance evaluation is important .......... 2
5 Performance evaluation process .............................. 2
   5.1 General .......................................................... 2
   5.2 Elements of a performance evaluation process ... 3
   5.3 Performance evaluation sources of information and tools ................................................................. 3
      5.3.1 General ...................................................... 3
      5.3.2 Inspections ................................................ 3
      5.3.3 Pre-activity and post-activity reviews .......... 4
      5.3.4 Exposure assessments and occupational health surveillance ......................................................... 4
      5.3.5 Health and safety meetings ......................... 5
      5.3.6 Focus groups ............................................. 5
      5.3.7 Surveys ..................................................... 5
      5.3.8 Interviews ................................................ 5
      5.3.9 Injury and ill health tracking ...................... 6
      5.3.10 Incident investigations ............................ 6
      5.3.11 Audits ..................................................... 7
      5.3.12 Management review ................................. 7
6 Performance indicators ............................................ 7
   6.1 General .......................................................... 7
   6.2 Selection of performance indicators ................. 7
   6.3 Key characteristics of indicators ..................... 8
   6.4 Life cycle of indicators .................................... 9
   6.5 Types of indicators ......................................... 10
      6.5.1 General .................................................. 10
      6.5.2 Leading and lagging indicators ................. 11
      6.5.3 Quantitative and qualitative .................... 11
      6.5.4 Potential unintended consequences .......... 12
      6.5.5 Value and limitations of benchmarking ..... 13
7 Integration of OH&S performance evaluation into business processes ................................................. 13
8 Monitor, measure, analyse and evaluate .................. 14
   8.1 General .......................................................... 14
   8.2 Uncertainty .................................................... 15
   8.3 Monitor and measure ....................................... 15
   8.4 Analyse .......................................................... 15
   8.5 Evaluate .......................................................... 16
9 Communication ...................................................... 16
10 Act on results ........................................................ 17
11 Review performance evaluation processes ............. 17
Annex A (informative) Performance evaluation examples ................................................................. 19
Bibliography ............................................................. 30
Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO’s adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 283, Occupational health and safety management.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.
Introduction

This document is intended to help organizations to effectively monitor, measure, analyse and evaluate occupational health and safety (OH&S) performance.

OH&S performance evaluation includes the processes that the organization uses to assess the adequacy of activities that are expected to achieve intended results. OH&S performance is normally evaluated by using a combination of processes and sources of information such as incident investigations, inspections, audits, qualitative and quantitative indicators, culture surveys and interviews.

This document gives guidance on performance evaluation processes, including:

— selection and use of performance processes including indicators;
— monitoring and measuring to obtain data;
— analysing the data to allow performance of evaluation;
— unintended consequences;
— limitations, such as under- and over-reporting, and data distortion.

This document can be used by organizations of all types, regardless of whether they have implemented a formal OH&S management system (see ISO 45001 and ISO 45002).

This document provides examples which demonstrate how to evaluate performance to drive continual improvement and support the organization in achieving its intended results.

This document recommends a balanced approach based on selection of performance evaluation processes and indicators, with emphasis on proactive (leading) OH&S performance indicators. It recognizes that over-emphasis on past performance (lagging) indicators, such as incidence and frequency rates, can undermine efforts to improve OH&S performance.

As every organization is unique, and intended results vary, there is not a standardized set of performance evaluation processes or set of indicators that fulfil the needs of all organizations. Therefore, every organization has to identify performance evaluation processes and indicators to suit its needs.

Effective performance evaluation can help the organization to demonstrate continual improvement, and therefore may need to be adjusted when the organization’s performance changes. Effectiveness is the result of selecting the appropriate performance evaluation processes and properly implementing them. When performance evaluation processes are used inappropriately (e.g. in a way that is perceived to blame individuals for system deficiencies), they can produce unintended consequences. The most common of these consequences are discussed in this document.

This document is designed to complement ISO 45001 by providing performance evaluation approaches that align with requirements of that standard. This document can be used independently, by any organization, to improve OH&S performance.
Occupational health and safety management — Guidelines on performance evaluation

1 Scope

This document gives guidance regarding how organizations can establish monitoring, measurement, analysis and evaluation processes, including the development of relevant indicators for the assessment of occupational health and safety (OH&S) performance. It enables organizations to determine if intended results are being achieved, including continual improvement of OH&S performance.

This document is applicable to all organizations regardless of type, industry sector, level of risk, size or location. It can be used independently or as part of OH&S management systems, including those based on ISO 45001:2018, or other standards or guidelines.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 45001:2018, Occupational health and safety management systems — Requirements with guidance for use

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 45001:2018 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp
— IEC Electropedia: available at https://www.electropedia.org/

3.1 measurement
process to determine a value

Note 1 to entry: Measurement can relate to managing activities, processes, products, services, systems or organizations.

[SOURCE: ISO 45001:2018, 3.31, modified — Note 1 to entry replaced.]

3.2 indicator
variable that can be measured or described, representing the status or a characteristic of operations, processes, management, and conditions or outcomes

Note 1 to entry: Indicators are generally measurable and can be quantitative or qualitative.

Note 2 to entry: Lagging indicators relate to past performance.

Note 3 to entry: Leading indicators relate to factors that can influence future performance.

Note 4 to entry: Some organizations use the term “metric” instead of “indicator”.