ANSI/ASSP Z390.1-2017

Accepted Practices for Hydrogen Sulfide Safety Training Programs

The American Society of Safety Engineers (ASSE) is now the American Society of Safety Professionals (ASSP). ASSP continues to be the Secretariat for the committee producing this standard and continues to hold the copyright to this standard. There is no change to the content and requirements in the standard. The only change is on the cover indicating the organizational name change of the standards developing organization from ASSE to ASSP.



AMERICAN SOCIETY OF SAFETY PROFESSIONALS



The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Engineers (ASSE) as secretariat of the ANSI accredited Z390 committee or individual committee members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this standard, ASSE or the Z390 committee does not ensure that adherence to these recommendations will protect the safety or health of any persons or preserve property.

ANSI® ANSI/ASSE Z390.1 – 2017

American National Standard

Accepted Practices for Hydrogen Sulfide (H₂S) Training Programs

Secretariat

American Society of Safety Engineers 520 N. Northwest Highway Park Ridge, Illinois 60068

Approved June 30, 2017

American National Standards Institute, Inc.

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard, Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published September 2017 by

American Society of Safety Engineers 520 N. Northwest Hwy Park Ridge, IL 60068 (847) 699-2929 • www.asse.org

Copyright ©2017 by American Society of Safety Engineers 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 Foreword is not a part of American National Standard Z390.1-2017.)

The charter of the American National Standard Committee Z390 on Hydrogen Sulfide (H_2S) Training was accredited by the American National Standards Institute (ANSI) on January 1, 1993. This standard grew out of the recognition of a need for specialized training dealing with this toxic chemical, above and beyond conventional hazard communications training, due to numerous fatal accidents involving victims and their would-be rescuers succumbing to the effects of hydrogen sulfide.

Historically, H₂S training issues have been addressed by only a few industries, and the consistency of the training criteria varied greatly from one organization to another. For these reasons, the standard addresses the individual training criteria that should be incorporated into a comprehensive training course. These criteria were developed by combining accepted practices in numerous affected industries. Most significantly, emphasis has been given to the qualifications and proficiency of individual H₂S safety instructors, as well as student performance-based competency and qualifications.

The guidelines presented in this document are designed to provide workers the fundamental knowledge to protect themselves from H₂S exposure. This document does not include the information necessary to satisfy the requirements of the ANSI/ASSE Z88.2, *Practices for Respiratory Protection,* and OSHA Respiratory Protection 29 CFR 1910.134. In addition, this document does not provide the site-specific information necessary to work at a particular facility.

Governmental regulations (see OSHA Hazard Communication 29 CFR 1910.1200) specify mandatory requirements for the training of personnel working with or around hazardous chemicals. As a voluntary consensus standard, this document complements those regulations. However, compliance with this standard does not assure compliance with governmental regulations, and vice versa.

The Z390 Committee solicits public input that may suggest revisions to the standard. Such input should be sent to the Secretariat, American Society of Safety Engineers, 520 N. Northwest Highway, Park Ridge, Illinois 60068.

Revisions: The Z390 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually every five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording, and the reason for the proposal. Pertinent documentation would enable the Z390 Committee to process the changes in a timely manner.

Interpretations: Upon a request in writing to the Secretariat, the Z390 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant section number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

Only the Z390 Committee (through the Z390 Secretariat) is authorized to provide any interpretation of this standard.

Approval: Neither the Z390 Committee nor the American National Standards Institute (ANSI) approves, certifies, rates or endorses any item, construction, proprietary device or activity.

Appendices: Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

Committee Meetings: The Z390 Committee meets on a regular basis. Persons wishing to attend a meeting should contact the Secretariat for information.

Standard Approval: This standard was developed and approved for submittal to ANSI by the American National Standards Committee on H₂S Training, Z390. Committee approval of the standard does not necessarily imply that all members voted for its approval. At the time of its approval, the Z390 Standards Committee had the following members:

Charles Simpson, CSP, Chair Eric Rosemann, CSP, Vice Chair Ovidiu Munteanu, Secretary Timothy R. Fisher, CSP, CHMM, ARM, CPEA, Assistant Secretary Jennie Dalesandro, Administrative Technical Support

Organization Represented

American Society of Safety Engineers Association of Energy Service Companies

Central Maintenance & Welding, Inc. Crawford Consulting CS Consulting

Draeger Safety, Inc.

EPIC Insurance Brokers & Consultants Eric Rosemann & Associates Greenwich Terminals

Halcon Resources

High Plaines Safety Training Center International Training Consortium Legacy Safety & Consulting, LLC National Safety & Transportation Institute Ohio University Petroleum Education Council

RJR Safety Inc. Ross & Yerger Insurance, Inc.

Savage Services STS Solutions Inc. TSI – The Sulphur Institute U.S. Coast Guard WRC Safety & Risk Consultants Zealous Energy Services

Name of Representative

Frank Perry, P.E., CSP Kenneth Houston Steve Olson, CSP Shawn MacConnell Kendall Crawford, P.E., CSP Steve Dacus **Tyrell Marlow** Nora Guerra Salinas Larry Medina Charles Simpson, CSP Eric Rosemann, CSP Erick Hawley-Saia William Sammons Alex Christenson William Walker, CIH, CSP Dan Brinkman, LSM, MSA, CSM, CSSM Charlotte Grove, CET, CIT Jeffrey Painter Dennis Andrews, Ph.D., PSP, CECD, WSO-CSS Bruce Brown **Richard Emberling** Katie Hill, CSP Wavne Vanderhoof, CSP Greg Maloney Shelby Simpson Jim McCov Timothy Wells, CSHM, WSO.CSM Craig Jorgenson Carolyn Onye William Coffey Chris Klock