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Client Perceptions of Occupational Health and Safety Management System Assistance Provided by OSHA On-Site Consultation: Results of a Survey of Colorado Small Business Consultation Clients

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The Occupational Safety and Health Administration (OSHA) On-Site Consultation Service provides assistance establishing occupational health and safety management systems (OHSMS) to small businesses. The Safety and Health Program Assessment Worksheet (Revised OSHA Form 33) is the instrument used by consultants to assess an organization's OHSMS and provide feedback on how to improve a system. A survey was developed to determine the usefulness of the Revised OSHA Form 33 from the perspective of Colorado OSHA consultation clients. One hundred and seven clients who had received consultation services within a six-year period responded to the survey. The vast majority of respondents indicated that the Revised OSHA Form 33 accurately reflected their OHSMS and that information provided on the Revised OSHA Form 33 was helpful for improving their systems. Specific outcomes reported by the respondents included increased safety awareness, reduced injuries, and improved morale. The results indicate that the OHSMS assistance provided by OSHA consultation is beneficial for clients and that the Revised OSHA Form 33 can be an effective tool for assessing and communicating OHSMS results to business management. Detailed comments and suggestions provided on the Revised OSHA Form 33 are helpful for clients to improve their OHSMS.

Keywords Form 33, Injury and Illness Prevention Program, OHSMS, Safety and Health Program Assessment, SHARP

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INTRODUCTION

Occupational Health and Safety Management Systems (OHSMS) are a set of interrelated policies and

procedures that specify how an organization will manage workplace safety and health. OHSMS vary in content by organization and application, but common elements often include a health and safety policy; hazard detection and correction processes; safety training; methods of employee involvement; and management review. OHSMS are recognized by Occupational Safety and Health Administration (OSHA) officials as an effective business strategy to reduce the number and magnitude of occupational injuries and illnesses.⁽¹⁾ The OSHA On-Site Consultation Program provides small and medium size businesses with professional safety and health services, including assistance in establishing an OHSMS. Consultation programs are voluntary for participating businesses, and the program is funded primarily by the federal government and is managed by individual states. The Safety and Health Program Assessment Worksheet (Revised OSHA Form 33) is the tool used to measure the level of OHSMS programming for a participating business. Small businesses with exemplary OHSMS (as measured by relatively high scores on the Revised OSHA Form 33) and low rates of occupational injuries and illnesses are recognized by OSHA through the Safety and Health Achievement Recognition Program (SHARP). As the primary tool for assessing OHSMS and providing feedback for system improvement, the Revised OSHA Form 33 should be an effective means of communicating OHSMS deficiencies and potential remedies to employers.

The purpose of this research was to evaluate the usefulness of OHSMS assistance and the information provided on the Revised OSHA Form 33 to recipients of OSHA consultation services from the clients' perspective. Client perceptions of the Revised OSHA Form 33 were requested, along with information on any OHS improvements and any observed outcomes that resulted from the OHSMS assistance provided by OSHA consultants. Colorado small business clients of OSHA's On-Site Consultation Program were solicited for

participation in this research. All OSHA On-Site consultation visits in the state of Colorado originate from the Colorado State University OSHA Consultation Program in Fort Collins, Colorado.

BACKGROUND

Small businesses (less than 250 employees) account for a majority of occupational fatalities in the U.S.,⁽²⁾ and the nationally published non-fatal injury and illness rates may be underreported in these companies.⁽³⁾ It has been reported that an effective OHSMS may reduce the risk of injuries and illnesses in an organization.⁽⁴⁻⁶⁾ Organizational occupational health and safety (OHS) interventions may be less effective in small businesses as compared to larger organizations, due in part to limited knowledge and resources.⁽⁷⁾ However, the results of a 1998 Norwegian study indicated that organization size had no effect on the implementation of mandatory Internal Control regulations, which require companies to adopt a systematic approach to health, environmental, and safety activities, including requirements for documented safety objectives, risk assessments, hazard control, and system review.⁽⁸⁾ In a 2001 study of OSHA consultation clients in a Midwestern state, researchers found that higher OSHA Form 33 scores (using an older version of the instrument) were associated with fewer safety and health violations.⁽⁹⁾ More recently, Spanish researchers reported that small and medium sized Spanish manufacturers with OHSMS had significantly lower accident rates than those without, and those firms with the most advanced systems (as characterized by survey responses indicating above average performance on 12 OHSMS elements) had the lowest accident rates as compared to those with less comprehensive systems.⁽¹⁰⁾ Thus, OHSMS may be a feasible means for small businesses to reduce the risk of occupational injuries and illnesses.

The Revised OSHA Form 33 consists of 58 attributes that are scored on a scale from 0 (attribute not addressed) to 3 (attribute fully implemented) by OSHA consultants to measure the level of implementation of OHSMS attributes, as shown in Appendix A. The attributes are divided into seven OHSMS elements that include hazard anticipation and detection; hazard prevention and control; planning and evaluation; administration and supervision; safety and health training; management leadership; and employee participation. The Revised OSHA Form 33 also includes space for consultants to provide comments about each attribute scored on the form. A copy of the completed Revised OSHA Form 33 and a written report are provided to Colorado consultation clients to help them establish and improve their OHSMS and to correct any hazards identified by the consultant.

OSHA Consultants also provide recordkeeping assistance and record the injury and illness rates of their clients for a period of three years prior to the consultation visit, if three years of data are available.⁽¹¹⁾ However, fewer years may be used for new businesses that have not been in operation for three years.⁽¹¹⁾ Client injury and illness rates are computed

using the Log of Work-Related Injuries and Illnesses (OSHA Form 300).⁽¹²⁾ Two rates are recorded by the consultant. The first, Total Recordable Case rate, is computed by multiplying the total number of injuries and illnesses recorded on the OSHA Form 300 by 200,000 (the nominal number of hours worked by a 100 full-time employees in a single year) and then dividing the product by the total number of hours worked by employees of that organization in a year.⁽¹²⁾ This provides a normalized rate of injuries and illnesses that can be compared across employers of varying sizes and work schedules. The second injury and illness rate recorded by OSHA consultants is the so-called Days Away, Restricted, and Transferred (DART) rate. The DART rate is computed in the same manner as the TRC rate, except the only injuries and illnesses counted from the OSHA Form 300 are those that resulted in the employee missing work, being transferred to a different job requiring different abilities, or working with restrictions.⁽¹²⁾ No previous studies were found that examined if consultation clients viewed OHSMS assistance provided by the OSHA On-Site Consultation Service as beneficial or what changes clients have made based on the assistance provided.

METHODS

Subject Selection and Data Collection

The study population included management at Colorado businesses that received an OSHA consultation site visit from 2002–2007, consisting of a total of 942 closed consultation files. In 2008, every third, closed OSHA On-Site Consultation file in that time period was selected using an internal case file number for a total of 314 closed consultation files. A questionnaire was designed and validated to assess client perceptions about the Revised OSHA Form 33 and to determine what changes were made as a result of the feedback provided on the form. The validation process included a review by a panel of subject matter experts and by pilot testing of the instrument. Business demographic information was obtained from the selected consultation files. The questionnaire was mailed to the 314 former clients, along with a copy of their most recent Revised OSHA Form 33 for reference. A recruitment letter explaining the study and an informed consent document were included in the mailings. Subjects were also asked if they recalled receiving the Revised OSHA Form 33 and about their position in the organization. The mean, overall Revised OSHA Form 33 score and the mean score for each OHSMS element was determined for each potential subject. If a file had multiple Revised OSHA Form 33 records, such as in the case of some SHARP clients who received more than one OHSMS assessment, only the scores from the most recent form were used.

A follow-up questionnaire was sent to non-respondents eight weeks after the initial mailing and a follow-up telephone interview using the same questions was administered to a random sample of the remaining non-respondents 12 weeks after the initial mailing. An additional telephone interview was

TABLE I. Revised OSHA Form 33 Scores and Numeric Response Rates by OHSMS Element for Survey Responders and Non-Responders

Revised OSHA Form 33 Element	Revised OSHA Form 33 Scores ^A			
	Responders (n = 107)		Non-Responders (n = 207)	
	Mean (SD)	Response Rate ^B	Mean (SD)	Response Rate ^B
Overall	2.0 ^C (0.6)	72%	1.7 ^C (0.5)	63%
Hazard Anticipation and Protection	1.8 (0.7)	82%	1.5 (0.6)	73%
Hazard Prevention and Control	2.1 (0.6)	87%	1.9 (0.5)	81%
Planning and Evaluation	1.4 (1.0)	75%	1.0 (0.8)	66%
Administration and Supervision	2.1 (0.6)	75%	1.9 (0.6)	65%
Safety and Health Training	2.0 (0.6)	58%	1.8 (0.6)	52%
Management Leadership	2.1 (0.6)	67%	1.9 (0.6)	55%
Employee Participation	1.9 (0.6)	58%	1.7 (0.7)	46%

^APossible scores for Revised OSHA Form 33 attributes range from 0 (not present) to 3 (fully implemented).

^BNumber of attributes that received a numeric score divided by the total number of attributes.

^CThere was a significant difference (P-value < 0.001) between the mean, overall Revised OSHA Form 33 Score of Responders and Non-Responders .

OSHA – Occupational Safety and Health Administration.

OHSMS – Occupational Health and Safety Management System.

administered to 10% of respondents to verify questionnaire results. All aspects of this study were completed in accordance with procedures approved by the Colorado State University Institutional Review Board and the Research Integrity and Compliance Review Office. All statistical analyses were performed using Statistical Analysis System (SAS) software version 9.2 (Cary, North Carolina).

Questionnaire Data

Subjects were asked eight “yes” or “no” questions about the usefulness of the information provided on the Revised OSHA Form 33. Each survey question was followed by an open-ended question for respondents to provide additional information based on their responses to the survey item. Responses to follow-up questions were reviewed by the research team and grouped into relevant categories for descriptive analysis. The complete survey is provided in Appendix B.

Subjects were also asked about OHS improvements that were made and about outcomes that resulted from the OHSMS assistance they received. Reported OHSMS outcomes were grouped into the following categories: reduced injuries and illnesses; improved overall OHSMS; increased awareness, knowledge and/or involvement; increased morale and peace of mind; decreased costs, better quality product; and/or increased productivity.

RESULTS

Response Rates and Business Characteristics

The overall questionnaire response rate was 107 of 314 (34%). An additional 25 of 314 (eight percent) clients solicited were no longer in business, making them ineligible to participate. The effective response rate among potentially

eligible participants was 107 of 289 (37 percent). Fifty-one of 107 responding companies (48%) were identified using National American Industry Classification System (NAICS) codes as manufacturing companies, 13 of 107 (12%) were in the construction industry, and 43 of 107 (40%) were classified as other industries. Of the responding companies, 12 of 107 (11%) had participated in the OSHA SHARP program. Ninety-two respondents provided a job description and indicated whether they recalled receiving the Revised Form 33. Thirty-one of 92 (31%) indicated they were a safety or environmental supervisor/manager and another 31 indicated that they were another type of supervisor/manager. Eighteen of 92 (20%) identified themselves as the owner/president and 12 (13%) were categorized as other, which included jobs such as operator, human resources generalist, and engineer. Eighty-four of 92 responding subjects (91%) indicated that they recalled receiving the Revised OSHA Form 33, suggesting that the person completing the survey was working for the organization during the time of the original OHSMS assessment. The mean DART rate of each business recorded by the OSHA consultant was 3.5 (range 0–31) from the 58 responding businesses that had injury/illness rate data on file, and the mean TRC rate was 7 with the same range.

The mean, overall Revised OSHA Form 33 score for the 107 respondents was 2 (range 0.3–3). The mean, overall Revised OSHA Form 33 score for the 12 responding SHARP participants was 2.8 (range 2.5–3). The mean number of attributes assigned a numeric score was 42 out of 58 possible attributes for all respondents, and the mean number of attributes scored for SHARP participants was 49. A summary of Revised OSHA Form 33 scores and numeric response rates for each OHSMS element is provided in Table I.

TABLE II. Survey Responses from Colorado OSHA Consultation Clients About Revised OSHA Form 33 Usefulness

Survey Question	No. of Responses	Resp. Rate ^A	No. of “Yes” Answers	Proportion of Resp. ^B
1. Did the Form 33 accurately represent your OHSMS at the time it was evaluated?	102	95%	100	98%
2. Was the Form 33 easily understood?	102	95%	98	96%
3. Did the attributes on the Form 33 make sense?	102	95%	100	98%
4. Was the information in the Form 33 useful in improving your OHSMS?	102	95%	99	97%
5. Did the attributes on the Form 33 cover all aspects of a comprehensive OHSMS?	99	93%	98	99%
6. Did the scoring system on the Form 33 adequately measure each OHSMS element?	99	93%	91	92%
7. Were the comments/suggestions provided useful and helpful in improving your OHSMS?	99	93%	98	99%
8. Did you follow and use the comments or suggestions to make any changes?	98	92%	92	94%

^ANumber of responses to the question divided by the number of responses to the survey

^BNumber of “yes” responses divided by the total number of responses to the question

OSHA – Occupational Safety and Health Administration

Questionnaire Results

The results of the survey on client perceptions of OHSMS usefulness are provided in Table II. One hundred of 102 (98%) subjects that responded to the question indicated that the Form 33 scoring was accurate and that the attributes on the Form 33 made sense. Ninety-eight of 102 (96%) respondents indicated that the Form 33 was easy to understand, and 99 of 102 (97%) respondents indicated that the Form 33 was useful in improving the company’s OHSMS.

A smaller proportion of subjects answered the follow-up questions on the survey that came after each initial “yes” or “no” question. Only three of the eight open-ended questions received any responses. Of the three questions with responses, a total of 153 open-ended answers were received. The follow-up item for question four asked if the information provided on the Revised OSHA Form 33 was not useful for improving OHSMS, then what specific aspects of the form were not useful. The two comments received indicated that most attributes were not evaluated in one case and that no detailed information was provided on how to improve the OHSMS in the other case. The follow-up to question seven asked what types of comments were most helpful if the comments/suggestions on the Revised OSHA Form 33 were useful to the client. This question received 17 open-ended responses. Five of the 17 subjects (29%) who answered indicated that all of the comments on the Revised OSHA Form 33 were helpful. Another five of 17 (29%) stated that the more specific or detailed comments were the most helpful,

and seven of 17 (41%) thought comments that offered specific information on how to improve an attribute were the most helpful.

The final survey question about making changes as a result of the Revised OSHA Form 33 had a three-part follow-up question, one part for respondents who answered ‘no’ to the question, and two for those who answered “yes”. Of the four open-ended responses from subjects who answered “no” and did not make any changes based on the suggestions provided on the Form 33, two indicated that there were insufficient resources to make the changes, and the other two indicated no changes were required or specified on the form. Seventy-five subjects provided additional information on changes made based on the Revised OSHA Form 33. Twenty-three reported implementing new or updated safety programs, 18 reported improved PPE use and/or hazard reduction, 11 indicated increased employee involvement in OHS activities, 8 indicated additional worker and/or manager safety training, and 15 reported that all indicated changes or multiple OHS improvements were made. Finally, 55 subjects provided details about observed outcomes as a result of OHS changes made. Of these subjects, 22 indicated improved safety knowledge, reporting, and awareness, 15 reported reduced injuries or incidents, 12 indicated improved employee morale and peace of mind, 4 reported decreased operational costs, and 2 reported improved productivity or product quality. The complete client survey including follow-up questions is included in Appendix B.

DISCUSSION

The vast majority of respondents provided positive responses to all questions on the eight-item survey. Most clients believed that the Revised OSHA Form 33 was accurate, understandable, and useful for improving their OHSMS. The comments and suggestions provided on the form were largely viewed as helpful and most clients followed the suggestions to make changes in the workplace. Fewer respondents answered the open-ended questions, but the majority who did reported positive experiences and changes. The most frequently reported change was implementing or improving safety programs and the most frequently cited outcome was improved safety knowledge, reporting, and awareness followed by reduced injuries and illnesses. The few negative reports indicated that some clients did not feel there was sufficient information provided on the form or that there were insufficient resources to enact changes.

The comments and suggestions provided by consultants are likely more useful to clients than only a score of an individual attribute. The attribute score may help identify an area of strength or weakness, but an explanation of why a score was given and suggested changes are critical to convey information about how to improve the OHSMS. Clients indicated that consultant comments were helpful to improve their OHSMS, and detailed comments that offered suggestions for improvement were specifically cited.

Limitations

There are some important limitations to consider when interpreting these survey results. The study population was limited to consultation clients of a single state, and these subject perceptions may not necessarily reflect the perceptions of OSHA consultation clients nationally. Further, the Program Manager for the Colorado OSHA Consultation Program is one of the authors of the training manual provided to all OSHA consultants in the U.S.⁽¹³⁾ Thus, scoring more attributes of the Revised OSHA Form 33 or providing detailed comments to clients may be a higher priority for consultants in Colorado than in other states.

Subject recall may be another important consideration because the subjects were asked to remember details about a consultation visit that occurred up to six years prior to receiving the survey. To aid in the recall of the consultation visit, participants were provided with a copy of their OSHA Form 33 to reference when completing the survey. To determine if length of time since consultation resulted in different response rates, all 314 selected files were divided by date into 2 equal groups. The first group had received the survey within two years and 11 months since their consultation file was closed ($n = 157$). The second group received the survey between three and six years after their consultation file was closed ($n = 157$). The proportion of survey respondents in the two groups, relatively "long" and "short" elapsed time since file closure, were compared using a Pearson chi-squared test. There was no significant difference in the proportion of responders in the

two groups (32 and 36%, respectively) indicating that those subjects who had more time since receiving a consultation visit were equally likely to respond to the survey as those with less time elapsed since their consultation visit.

The low overall response rate to the survey was another important limitation. After the initial mailing, follow-up mailing, and the follow-up telephone call, the effective response rate was only 37%, well below what is considered necessary for generalizability of experimental findings in epidemiological research.⁽¹⁴⁾ However, a response rate of 30% has been proposed as reasonable for mailed patient satisfaction surveys.⁽¹⁵⁾ Regardless, it is important to consider potential non-response bias in the context of this study, as non-responders may have had less favorable experiences with the consultation process or the Revised OSHA Form 33. One way to assess potential differences between responders and non-responders is to compare the overall Revised OSHA Form 33 scores of both groups. Using the OSHA consultation files of the 314 closed consultation files initially selected for this study, a Wilcoxon Sign-Ranked Test was conducted to determine if there was a significant difference in the mean, overall Revised OSHA Form 33 score of the respondent and non-responding groups. There was a small but significant difference in the mean overall Revised OSHA Form 33 scores (P -value < 0.001), which suggests that the non-responding group had lower levels of OHSMS programming, and thus may not have received similar consultation experiences. A nonparametric test was used because the Revised OSHA Form 33 scores for both groups were not normally distributed. Further testing between responders and non-responder OHSMS scores had similar results, with the non-responding group scoring, on average, slightly but significantly lower on all seven of the OHSMS elements on the Revised OSHA Form 33.

Another way to assess whether the respondents were representative of the sample population is to compare the industries represented among responders and non-responders, and to compare the injury and illness rates of both groups. A smaller proportion of non-responding companies were in the manufacturing industry as compared to responders (33% and 48%, respectively) and a higher proportion of non-responders were in the construction industry (22% vs. 12%). The mean DART and TRC rates of non-responding companies (4.5 and 8.4, respectively) were higher than the average injury and illness rates of responding companies (3.5 and 7). However, the differences in injury and illness rates were not higher by a statistically significant margin when compared using a Wilcoxon Sign-Ranked Test (P -value = 0.40 and 0.35 for TRC and DART rates, respectively). Still, these differences in industry type and injury rates further suggest that survey respondents were not completely representative of the sample population and may therefore not reflect the views of all Colorado OSHA consultation clients. Survey response rates and study participation may be improved in future studies by soliciting interest in participation just after services are rendered and by incentivizing participation.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study indicate that many OSHA On-Site consultation clients in Colorado valued the OHSMS assistance they received and felt that the Revised OSHA Form 33 was helpful for improving their OHSMS. However, the low survey response rates achieved and lack of representativeness of respondents limit the generalizability of these findings. Survey respondents reported that the comments and suggestions provided on the Revised OSHA Form 33 were useful, and most clients used those comments to implement changes in the workplace. Many positive outcomes were reported by respondents, including reduced injuries and illnesses, improved morale, and decreased operational costs. OSHA consultants should make all reasonable efforts to provide detailed comments and suggestions to clients when completing an OHSMS assessment, particularly for low scoring attributes that need improvement. Further research is needed to determine if OSHA consultation clients in other states have similar experiences. Additional study is warranted to determine how Revised OSHA Form 33 scores are related to the OHS outcomes reported by the survey respondents, specifically improved economic outcomes and reduced injuries.

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REFERENCES

1. **Occupational Safety and Health Administration:** *Injury and illness prevention programs white paper*. U.S. Department of Labor, January 2012.
2. **Mendeloff, J., C. Nelson, K. Ko, and A. Haviland:** *Small Businesses and Workplace Fatality Risk: An Exploratory Analysis*. Santa Monica, CA: RAND Corporation, 2006.
3. **Oleinick, A., J.V. Gluck, and K.E. Guire:** Establishment size and risk of occupational injury. *Am.J. Indust. Med.* 28(1):1–21 (1995)
4. **Koda, S., and H. Ohara:** Preventive effects on low back pain and occupational injuries by providing the participatory occupational safety and health program. *J. Occup. Health Engl. Ed.* 41:160–165 (1999)
5. **Torp, S., T. Riise, and B.E. Moen:** Systematic health, environment, and safety activities: do they influence occupational environment, behaviour and health? *Occup. Med. (Oxford)* 50:326–333 (2000)
6. **Bunn III, W.B., D.B. Pickelny, T.J. Slavin, and S. Paralkar:** Health, safety, and productivity in a manufacturing environment. *J. Occup. Environ. Med.* 43(1):47–55 (2001)
7. **Eakin, J.M., F. Lamm, and H.J. Limborg:** International Perspective on the Promotion of Health and Safety in Small Workplaces. In *Systematic Occupational Health and Safety Management: Perspectives on an International Development*, K. Frick (ed.). Amsterdam: Emerald Grp., 2000. pp. 227–247.
8. **Nytrø, K., P.O. Saksvik, and H. Torvatn:** Organizational prerequisites for the implementation of systematic health, environment and safety work in enterprises. *Safety Sci.* 30(3):297–307 (1998)
9. **Akbar-Khanzadeh, F., and O.D. Wagner:** Safety and health program assessment in relation to the number and type of safety and health violations. *AIHAJ – Am. Indust. Hyg. Assoc.* 62(5):605–610 (2001)
10. **Arocena, P., and I. Nunez:** An empirical analysis of the effectiveness of occupational health and safety management systems in SMEs. *Int. Small Buss. J.* 28(4):398–419 (2010)
11. **Occupational Safety and Health Administration:** *Consultation Policies and Procedures Manual*. Directive No. CSP 02-00-002, U.S. Department of Labor, (2008).
12. **Occupational Safety and Health Administration:** “OSHA Forms for Recording Work-Related Injuries and Illnesses.” Available at <https://www.osha.gov/recordkeeping/new-osha300form1-1-04.pdf> (accessed February 25, 2015).
13. **Brazile, W.J., D.A. Autenrieth, and D.R. Sandfort:** *Occupational Health and Safety Management Systems Assessment Training*. Washington, D.C.: Occupational Safety and Health Administration, 2012.
14. **Rose, G., and D.J. Harper:** Epidemiology for the uninitiated: Conduct of surveys. *Brit. Med. J.* 2(6146):1201–1202 (1978)
15. **Press, I., and R.F. Ganey:** The mailout questionnaire as the practical method of choice in patient satisfaction monitoring. *J. Health Care Market.* 9(1):67–68 (1989)

APPENDIX A

Safety and Health Program Assessment Worksheet (Revised OSHA Form 33)

Hazard Anticipation and Detection						
	0	1	2	3	NA	NE
1. A comprehensive, baseline hazard survey has been conducted within the past five (5) years.						
Comments:						
2. Effective safety and health self-inspections are performed regularly.						
Comments:						
3. Effective surveillance of established hazard controls is conducted.						
Comments:						
4. An effective hazard reporting system exists.						
Comments:						
5. Change analysis is performed whenever a change in facilities, equipment, materials, or processes occurs.						
Comments:						
6. Accidents are investigated for root causes.						
Comments:						
7. Material Safety Data Sheets are used to reveal potential hazards associated with chemical products in the workplace.						
Comments:						
8. Effective job hazard analysis is performed.						
Comments:						
9. Expert hazard analysis is performed.						
Comments:						
10. *Incidents are investigated for root causes.						
Comments:						

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Hazard Prevention and Control

	0	1	2	3	NA	NE
11. Feasible engineering controls are in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
12. Effective safety and health rules and work practices are in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
13. Applicable OSHA-mandated programs are effectively in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
14. Personal protective equipment is effectively used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
15. Housekeeping is properly maintained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
16. The organization is properly prepared for emergency situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
17. The organization has an effective plan for providing competent emergency medical care to employees and others present at the site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
18. *Effective preventive maintenance is performed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
19. An effective procedure for tracking hazard correction is in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

Planning and Evaluation

	0	1	2	3	NA	NE
20. Workplace injury/illness data are effectively analyzed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
21. Hazard incidence data are effectively analyzed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
22. A safety and health goal and supporting objectives exist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
23. An action plan designed to accomplish the organizations safety and health objectives is in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
24. A review of in-place OSHA-mandated programs is conducted at least annually.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
25. *A review of the overall safety and health management system is conducted at least annually.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

Administration and Supervision

	0	1	2	3	NA	NE
26. Safety and health program tasks are each specifically assigned to a person or position for performance or coordination.						
Comments:						
27. Each assignment of safety and health responsibility is clearly communicated.						
Comments:						
28. *An accountability mechanism is included with each assignment of safety and health responsibility.						
Comments:						
29. Individuals with assigned safety and health responsibilities have the necessary knowledge, skills, and timely information to perform their duties.						
Comments:						
30. Individuals with assigned safety and health responsibilities have the authority to perform their duties.						
Comments:						
31. Individuals with assigned safety and health responsibilities have the resources to perform their duties.						
Comments:						
32. Organizational policies promote the performance of safety and health responsibilities.						
Comments:						
33. Organizational policies result in correction of non-performance of safety and health responsibilities.						
Comments:						

Safety and Health Training

	0	1	2	3	NA	NE
34. Employees receive appropriate safety and health training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
35. New employee orientation includes applicable safety and health information.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
36. Supervisors receive appropriate safety and health training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
37. *Supervisors receive training that covers the supervisory aspects of their safety and health responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
38. Safety and health training is provided to managers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
39. *Relevant safety and health aspects are integrated into management training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

Management Leadership

	0	1	2	3	NA	NE
40. Top management policy establishes clear priority for safety and health.						
Comments:						
41. Top management considers safety and health to be a line rather than a staff function.						
Comments:						
42. *Top management provides competent safety and health staff support to line managers and supervisors.						
Comments:						
43. Managers personally follow safety and health rules.						
Comments:						
44. Managers delegate the authority necessary for personnel to carry out their assigned safety and health responsibilities effectively.						
Comments:						
45. Managers allocate the resources needed to properly support the organizations safety and health system.						
Comments:						
46. Managers assure that appropriate safety and health training is provided.						
Comments:						
47. Managers support fair and effective policies that promote safety and health performance.						
Comments:						
48. Top management is involved in the planning and evaluation of safety and health performance.						
Comments:						
49. Top management values employee involvement and participation in safety and health issues.						
Comments:						

Employee Participation

	0	1	2	3	NA	NE
50. There is an effective process to involve employees in safety and health issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
51. Employees are involved in organizational decision making in regard to safety and health policy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
52. Employees are involved in organizational decision making in regard to the allocation of safety and health resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
53. Employees are involved in organizational decision making in regard to safety and health training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
54. Employees participate in hazard detection activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
55. Employees participate in hazard prevention and control activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
56. *Employees participate in the safety and health training of co-workers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
57. Employees participate in safety and health planning activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						
58. Employees participate in the evaluation of safety and health performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						

APPENDIX B

1. Did the Form 33 accurately represent your Occupational Health and Safety Management System at the time it was evaluated?

YES NO

If NO, please explain: _____

2. Was the Form 33 easily understood?

YES NO

If NO, please advise us as to how the form could be improved: _____

3. Did the items (attributes) on the Form 33 make sense?

YES NO

If NO, which aspects of the Form 33 did not make sense? _____

4. Was the information in the Form 33 useful in improving your Occupational Health and Safety Management System?

YES NO

If NO, which aspects of the Form 33 were not useful? _____

5. Did the items (attributes) on the Form 33 cover all aspects of a comprehensive Occupational Health and Safety Management System?

YES NO

If NO, what are the Safety and Health Program aspects that are not measured by the Form 33? Please list: _____

6. Did the scoring system on the Form 33 adequately measure each Occupational Health and Safety Management System element?

YES NO

If NO, please advise us as to how you would improve the scoring system: _____

7. Were the comments/suggestions provided useful and helpful in improving your Occupational Health and Safety Management System?

YES NO

What types of comments were most helpful? _____

8. Did you follow and use the comments/suggestions to make any changes?

YES NO

If NO, please list major obstacles that prevented you from following these suggestions: _____

If YES, what types of changes did you implement as a result of the comments/suggestions on your assessment? _____

If YES, what were the effects or outcomes of your changes? (Example: reduced incidence of on the job injuries, changes in Workers Compensation premium expenses, better morale in the workplace, reduced turnover of employees, better product quality, etc.) Please list any outcomes that you experienced due to changes made to your Occupational Health and Safety Management System: _____