



A Division of The Society of The Plastics Industry, Inc.

APR 02 1990

JCL

March 26, 1990

TO: The VI Health, Safety & Environment Committee

RE: OSHA: Respirators/Engineering Controls

As noted on the attached, OSHA has scheduled a public hearing (May 30th) to receive testimony on the Agency's June 5, 1989 proposal to amend existing regulations by identifying certain circumstances for which engineering controls may not be feasible.

Meredith N. Scheck
Assistant Director

MNS/pmb

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

REC'D MAR 23 1990

TO: OHEIC Steering Committee
FROM: Phil Stapleton *JS* Assistant Technical Director, Issues Analysis
RE: OSHA Informal Public Hearing on Alternative Methods of Compliance
DATE: March 20, 1990

On March 7, 1990 (55 FR 8152) OSHA announced that an informal public hearing would be held to discuss circumstances in which respirators may be used in lieu of engineering controls to limit exposure to toxic substances.

As you may recall, OSHA proposed to amend its regulations on June 5, 1989 (54 FR 23995) to provide flexibility in circumstances where limiting exposure through implementation of engineering controls was infeasible. The proposed rule identified several situations where engineering controls may not be feasible including, among others:

- where engineering controls result in only negligible reduction in exposure,
- during emergencies, repair, shutdowns, and field situations where there is a lack of utilities, and
- during entry into unknown atmospheres.

OSHA requested comments on the consideration of cost-effectiveness in determining acceptable control methods, the appropriateness of using respirators in lieu of engineering controls and other aspects of the proposal.

The informal hearing is being conducted by OSHA in order to receive testimony and data relevant to the issues raised by the proposed rule. The hearing is scheduled for May 30, 1990, starting at 9:30 am. The location of the hearing will be the Dept. of Labor Building, 200 Constitution Avenue, Washington, D.C.

The Federal Register notice is attached. Please call if you have any questions or comments.

PJS/rc
Attachment

cc: H. P. Toner
Richard LaLumondier
Betsy Shirley
Rich Gottwald

February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Parts 71 and 73

Aviation safety, Continental control area, Restricted areas.

The Proposed Amendments

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration proposes to amend parts 71 and 73 of the Federal Aviation Regulations (14 CFR parts 71 and 73) as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.151 [Amended]

2. Section 71.151 is amended as follows:

R-6320 Matagorda, TX [New]

PART 73—SPECIAL USE AIRSPACE

3. The authority citation for 73 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510, 1522; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 73.63 [Amended]

4. Section 73.63 is amended as follows:

R-6320 Matagorda, TX [New]

Boundaries. That airspace within a 3-mile circle centered at lat. 28°42'34" N., long. 95°57'34" W.

Designated altitudes. Surface up to and including 15,000 feet MSL.

Time of designation. Continuous.

Controlling agency. Houston ARTCC.

Using agency. United States Customs Service.

Issued in Washington, DC, on February 27, 1990.

Harold W. Becker,

Manager, Airspace-Rules and Aeronautical Information Service.

(FR Doc. 90-5146 Filed 3-6-90; 8:45 am)

BILLING CODE 1910-13-4

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. H-160]

RIN 1218-AA28

Health Standards; Methods of Compliance

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice of informal public hearing.

SUMMARY: OSHA is scheduling an informal public hearing on its proposed standard [54 FR 23991, June 5, 1989] to modify the existing provisions for controlling employee exposure to toxic substances found in 29 CFR 1910.1000(e) and 29 CFR 1910.134(a)(1). This hearing will allow interested persons to present information and evidence on the issues raised by the proposed standard.

DATES: Notices of intention to appear at the informal public hearing must be postmarked by April 18, 1990.

Testimony, comments and all evidence which will be introduced into the hearing record must be postmarked by May 7, 1990. The hearing will be held in Washington, DC beginning Wednesday, May 30, 1990 at 9:30 a.m. The hearing will continue, if necessary, through Friday, June 1, 1990.

ADDRESSEE: Notices of intention to appear at the hearing and testimony and documentary evidence which will be introduced into the hearing record must be submitted in quadruplicate to Mr. Tom Hall, Occupational Safety and Health Administration, Division of Consumer Affairs, Room N3649, 200 Constitution Avenue NW., Washington, DC 20210; (202) 523-8615.

The informal public hearing will be held in the auditorium of the Frances Perkins Department of Labor Building, 200 Constitution Avenue NW., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT:

Hearings: Mr. Tom Hall, Occupational Safety and Health Administration, Division of Consumer Affairs, Room N3649, 200 Constitution Avenue NW., Washington, DC 20210; (202) 523-8615

Proposal: Mr. James F. Foster, Office of Public Affairs, U.S. Department of Labor, Occupational Safety and Health Administration, Room N3649, 200 Constitution Avenue NW., Washington, DC 20210; (202) 523-8151.

SUPPLEMENTARY INFORMATION: On June 5, 1989, OSHA proposed to amend its

existing provisions for the methods of controlling exposure to toxic substances addressed in its Air Contaminant Standard (29 CFR 1910.1000(e)) and Respiratory Protection Standard (29 CFR 1910.134(a)(1)). The Agency proposed to incorporate additional flexibility in its methods of compliance requirements by explicitly setting forth, in regulatory language, the circumstances under which respirators may be used due to the general infeasibility of limiting exposure through implementation of engineering controls. Other approaches to providing employers with greater flexibility in choosing exposure control methodology were also raised in the preamble to the proposed rule.

OSHA's proposed standard is based on data submitted to the record in response to an Advance Notice of Proposed Rulemaking published on February 22, 1983 (48 FR 7473), and on its experience from other rulemakings dealing with the issue of compliance methodology. The record identified specific situations where engineering controls generally may not be feasible and where respirators may have to be used. The circumstances that were identified by OSHA from data in the record where engineering controls may generally be infeasible are:

1. During the time necessary to install feasible engineering controls;
2. Where feasible engineering controls result in only a negligible reduction in exposure;
3. During emergencies, life saving, recovery operations, repair, shutdowns, and field situations where there is a lack of utilities for implementing engineering controls;
4. Operations requiring added protection where there is a failure of normal controls; and
5. Entries into unknown atmospheres.

The proposed standard incorporated regulatory language specifically exempting these circumstances from requirement of control by engineering means.

OSHA proposed paragraph (f)(5) to deal with circumstances where it was infeasible to protect employees from unknown atmospheres through the use of engineering or administrative controls. The discussion of the proposed provision (54 FR at 23995) included reference to confined spaces as examples of workplaces which would be covered by paragraph (f)(5). OSHA wishes to clarify that discussion by noting that there are, in fact, many confined space work situations where it is feasible to protect employees from any hazards which may be confronted in unknown atmospheres through the use

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BOR 009019

of engineering controls. Therefore, only those confined spaces where it is infeasible to protect employees using such controls would be covered by proposed paragraph (f)(5). OSHA solicits testimony, with supporting information, on any workplace circumstances, including confined spaces, which would be appropriately regulated under the proposed paragraph.

The proposed standard also raised for comment other circumstances and approaches where the use of respirators in lieu of feasible engineering controls have been suggested as being suitable in controlling exposure to toxic substances. Comment was requested on the appropriateness of utilizing respirators to control exposure when performing brief, intermittent tasks, during maintenance activities, and to achieve compliance with short-term exposure limits. Further, OSHA requested comment on: (1) Circumstances in which cost effectiveness factors would be a legitimate consideration in determining the acceptability of one control method over another; (2) the appropriateness of allowing respirator use in lieu of feasible engineering controls in certain instances where the employer has submitted a comprehensive written respirator compliance program to the Agency; (3) whether reliable and predictable exposure control can be achieved if employers are allowed to establish a "respirator budget" to allocate a certain number of days per year or hours per day for employees to wear respirators in lieu of implementing feasible engineering controls; and (4) whether it would be acceptable to allow employers under any circumstances to comply with exposure limits by any method the employer deems advisable.

OSHA is interested in receiving testimony and data on the issues mentioned above and on other issues relevant to the discussions set-forth in the proposal.

In response to the proposed rule, OSHA has received 89 written comments from interested parties. These comments are available for inspection and copying in the OSHA Docket Office, Room N-2625, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. In addition, OSHA received requests for a public hearing from the American Iron and Steel Institute (Ex. 6-20), SPI Composites Institute (Ex. 6-22), and the United Steelworkers of America (Ex. 6-73).

Persons interested in participating in the hearing should refer to the notice of proposed rulemaking on Methods of Compliance (54 FR 23991) for the text of the proposal and a more thorough

discussion of issues related to this proceeding.

Public Participation in Hearing

Pursuant to section 6(b) (3) of the Act, an opportunity to submit oral testimony concerning the limited issues raised by this notice will be provided at an informal public hearing scheduled to begin at 9:30 a.m. on May 30, 1990 in the Auditorium, Frances Perkins Department of Labor Building, 200 Constitution Avenue, NW., Washington, DC 20210.

Notice of Intention to Appear

All persons desiring to participate at the hearing must file in quadruplicate a notice of intention to appear, postmarked on or before April 18, 1990, addressed to Mr. Tom Hall, OSHA Division of Consumer Affairs, Docket H-160, Room N-3647, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 523-8615. The notice of intention to appear also may be transmitted by facsimile to (202) 523-5046 or (for FTS) to 8-523-5046, provided the original and 4 copies of the notice are sent to the above address thereafter.

The notices of intention to appear, which will be available for inspection and copying at the OSHA Technical Data Center Docket Office, Room N-2625, 200 Constitution Avenue NW., Washington, DC 20210, telephone (202) 523-7894, must contain the following information:

- (1) The name, address, and telephone number of each person to appear;
- (2) The capacity in which the person will appear;
- (3) The approximate amount of time requested for the presentation;
- (4) The specific issues that will be addressed;
- (5) A statement of the position that will be taken with respect to each issue addressed; and
- (6) Whether the party intends to submit documentary evidence, and if so, a brief summary of that evidence.

Filing of Testimony and Evidence Before Hearing

Any party requesting more than 10 minutes for a presentation at the hearing, or who will submit documentary evidence, must provide in quadruplicate the complete text of his testimony, including any documentary evidence to be presented at the hearing, to the OSHA Division of Consumer Affairs. This material must be postmarked by May 7, 1990 and will be available for inspection and copying at the Technical Data Center Docket Office. Each such submission will be

reviewed in light of the amount of time requested in the Notice of Intention to Appear. In those instances where the information contained in the submission does not justify the amount of time requested, a more appropriate amount of time will be allocated and the participant will be notified of that fact.

Any party who has not substantially complied with this requirement may be limited to a 10-minute presentation. Any party who has not filed a notice of intention to appear may be allowed to testify, as time permits, at the discretion of the Administrative Law Judge.

OSHA emphasizes that the hearing is open to the public, and that interested persons are welcome to attend. However, only persons who have filed proper Notices of Intention to Appear at the hearing will be entitled to ask questions and otherwise participate fully in the proceeding.

Conduct and Nature of Hearing

The hearing will commence at 9:30 a.m., on May 30, 1990. At that time, any procedural matters relating to the proceeding will be resolved. The informal nature of the rulemaking hearings to be held is established in the legislative history of section 6 of the Act and is reflected by the OSHA hearing regulations (see 29 CFR 1911.15(a)). Although the presiding officer is an Administrative Law Judge and questioning by interested persons is allowed on crucial issues, it is clear that the proceeding shall remain informal and legislative in type. The intent, in essence, is to provide an opportunity for effective oral presentation by interested persons which can be carried out expeditiously and in the absence of rigid procedures which might unduly impede or protract the rulemaking process.

The hearings will be conducted in accordance with 29 CFR part 1911. The hearing will be presided over by an Administrative Law Judge who will have all the powers necessary and appropriate to conduct a full and fair informal hearing as provided in 29 CFR part 1911 including the powers.

- (1) To regulate the course of the proceedings;
- (2) To dispose of procedural requests, objections and comparable matters;
- (3) To confine the presentation to the matters pertinent to the issues raised;
- (4) To regulate the conduct of those present at the hearing by appropriate means;
- (5) In the Judge's discretion, to question and permit the questioning of any witness and to limit the time for questioning; and

(6) In the Judge's discretion, to keep the record open for a reasonable, stated time to receive written information and additional data, views, and arguments from any person who participated in the oral proceedings.

Following the close of the hearing, the presiding Administrative Law Judge will certify the record of the hearing to the Assistant Secretary of Labor for Occupational Safety and Health. The Administrative Law Judge does not make or recommend any decisions as to the content of the final standard.

The proposed standard will be reviewed in light of all testimony and written submissions received as part of the record and a standard will be issued based on the entire record of the proceeding, including the written comments and data received from the public.

Authority and Signature

This document was prepared under the direction of Gerald F. Scannell, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210.

It is issued under section 6(b) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655), Secretary of Labor's Order No. 9-83 (48 FR 35736) and 29 CFR part 1911.

Signed at Washington, DC on this 28th day of February, 1990.

Gerard F. Scannell,

Assistant Secretary of Labor.

[FR Doc. 5077 Filed 3-6-90; 8:45 am]

BILLING CODE 4510-26-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 117

[CGD5-90-003]

Drawbridge Operation Regulations;
Elizabeth River, Eastern Branch,
Norfolk, VA

AGENCY: Coast Guard, DOT.

ACTION: Supplemental Notice of
Proposed Rulemaking.

SUMMARY: The Coast Guard is issuing a supplemental proposed rule for the operation of the Berkley drawbridge across the Eastern Branch of the Elizabeth River, mile 0.4, in Norfolk, Virginia, to allow commercial vessels with drafts 22 feet or greater passage through the bridge during the morning and evening rush hours. This supplemental proposed rule will include a requirement that these deep draft

vessels give a 12-hour advance notice for passage through the drawbridge during peak traffic hours. The proposed changes to these regulations are, to the extent practical and feasible, intended to provide for regularly scheduled drawbridge openings to help reduce motor vehicle traffic delays and congestion on the roads and highways linked by this drawbridge.

DATES: Comments must be received on or before April 23, 1990.

ADDRESSES: Comments should be mailed to Commander (ob), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704-5004. The comments and other materials referenced in this notice will be available for inspection and copying at the above address, room 507, between 8 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Comments may be hand-delivered to this address.

FOR FURTHER INFORMATION CONTACT: Ann B. Deaton, Bridge Administrator, Fifth Coast Guard District at (804) 398-6222.

SUPPLEMENTARY INFORMATION: On October 17, 1989, the Coast Guard published a proposed rule (54 FR 42517) to evaluate bridge opening restrictions during the morning and evening rush hours for the Berkley Bridge. The Commander, Fifth Coast Guard District also published the proposed rule as a public notice on October 6, 1989. Interested persons were given until December 1, 1989, to comment on the proposed rule that was published in the Federal Register. The comment period for the public notice ended November 9, 1989. An amendment to the public notice was issued November 6, 1989, extending the comment period to December 1, 1989, to coincide with the comment period published in the Federal Register.

This supplementary proposed rule exempts commercial vessels with drafts of 22 feet or greater from rush hour restrictions provided they give at least 12 hours advance notice for a bridge lift. Imposition of the 12-hour advance notice requirement will provide motorists with an opportunity to learn about scheduled bridge openings by radio broadcasts and any other means established by the bridge owner.

Public comments are requested on the deep draft vessel exemption provision and the 12-hour advance notice to ensure that this proposal is both reasonable and workable. Persons wishing to comment may do so by submitting written comments to the office listed under "ADDRESSES" in this preamble. Persons submitting comments should include their names and addresses, identify the bridge and give

reasons for their comments. The Commander, Fifth Coast Guard District, will evaluate all communications received and determine a final course of action on this supplemental proposal. This rule may be changed based on comments received.

Drafting Information

The drafters of this notice are Linda L. Gilliam, project officer, and LT S. M. Fitten, project attorney.

Discussion of Proposed Regulations

On June 14, 1989, Senator Stanley C. Walker requested that the regulations for the drawbridge across the Eastern Branch of the Elizabeth River at mile 0.4 in Norfolk, Virginia, be amended to restrict openings during the peak highway traffic hours to help reduce traffic congestion, but remain open on signal during the rest of the time. The proposed change would have closed the Berkley Bridge to commercial, recreational, and public vessels Monday through Friday, except Federal holidays, from 5:30 a.m. to 9 a.m., and from 3:30 p.m. to 6:30 p.m. A provision that allows the draw to open on signal at all times for vessels in distress was made a part of the proposal. This supplemental proposal includes the above with an additional provision which provides commercial deep draft vessels with drafts of 22 feet or greater access through the bridge anytime provided they give a 12-hour advance notice of their arrival during the morning and evening rush hours.

As a result of the proposed rule that was published in the Federal Register (54 FR 42517) and the public notice issued on October 6, 1989, written comments were received from the maritime community and the motoring public. The comments from motorists were all in favor of the proposed restrictions during peak traffic hours since elimination of draw openings during these hours should help reduce traffic disruption, delays, congestion and minor accidents. The comments from the commercial marine industry were opposed to restricting the drawbridge based on such generalized factors as safety, economic impact concerns, and deep-draft vessel navigation requirements. The industry stated that restriction of deep draft vessels during the morning and evening rush hours would result in numerous days when vessels with drafts of 22 feet or greater would not be able to navigate through the bridge since these vessels require high tide to go upstream of the bridge due to the channel depth. The original proposal would have generally



A Division of The Society of The Plastics Industry, Inc.

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March 26, 1990

TO: The VI Health, Safety & Environment Committee

RE: OSHA Survey on Medical Surveillance and Exposure Assessment Program

As the attached material from SPI notes, the Occupational Safety and Health Administration intends to initiate (perhaps as early as mid-April), a survey of industrial programs for medical surveillance, exposure monitoring and integrated process safety management systems. An advance copy of the general survey form is included in this material. Please feel free to pass this information on to the appropriate person in your company.

I will keep you apprised of any follow-up planned by SPI related to this issue.

Sincerely yours,

Meredith N. Scheck
Assistant Director

MNS/pmb

cc: P. Stapleton, SPI

REC'D MAR 26 1990



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

TO: OHEIC Steering Committee

FROM: Phil Stapleton - Assistant Technical Director, Issues Analysis

RE: Upcoming OSHA Survey on Medical Surveillance and Exposure Assessment Programs

DATE: March 21, 1990

As noted in the Federal Register on February 23 (55 FR 6491), OSHA intends to conduct a large-scale survey of industrial programs for medical surveillance, exposure assessment, and integrated process safety management systems. If expedited OMB approval of this survey is granted, OSHA plans to initiate telephone surveys by mid-April.

As you may recall, OSHA announced in November 1989 that it planned to propose generic standards for medical surveillance. The voluntary survey is intended to collect the data needed to evaluate compliance costs associated with possible generic standards for medical surveillance, exposure assessment and integrated process safety systems.

A copy of the survey form is attached. As you can see, the survey requests information on the following topics:

- types of chemicals used on-site, their annual usage, number of employees exposed, and how many of these employees are covered by medical surveillance programs.
- medical surveillance programs - frequency and extent of examinations, how the program is implemented, how the information is used, etc.
- exposure monitoring - extent of coverage, types of substances/hazards covered, how the information is used etc.
- integrated process safety management systems - use of pre-startup safety reviews, written operating procedures, safety inspections, equipment testing and maintenance, and personal protective equipment.

In addition to these topics, the survey also requests information on hazard communication and training programs, and recent injury and illness records.

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It would appear that OSHA is poised to significantly increase its use of generic standards to supplement more stringent exposure limits for hazardous substances and other safety requirements. We may want to collect information (independent of OSHA's survey) on the use of medical surveillance, exposure assessment and integrated process safety management systems within the plastics industry so that we can accurately estimate the potential costs of implementing such programs.

If you have any questions or comments please let me know.

PJS/rc

Attachment

cc: Pat Toner - SPI
Lew Freeman - SPI
Richard LaLumondier - SPI
Maureen Healey - SPI
John Dubeck - Keller & Heckman

BOR 009024

OMB Approval No. xxxx
SIC Code xxxx
OSHA Contact: Kristine Leininger
(202) 523-7177

February 2, 1990

Name
Company
Address
City, State

Dear -----:

The Occupational Safety and Health Administration (OSHA) is considering the development of generic standards to address medical surveillance and exposure monitoring programs. OSHA is also developing regulations on integrated safety management methods for process-related hazards, including fire and explosion risks, injuries due to ergonomic factors, and other contributors to workplace injuries and illnesses. OSHA believes such regulations could significantly improve workplace safety and health as well as enhance the effectiveness of existing regulations.

OSHA is conducting a voluntary telephone survey as part of this regulatory effort to determine the extent to which medical surveillance, exposure monitoring, and process safety management are currently done in industry. Your firm has been selected to participate in this survey, and an interviewer will be calling you within the next few weeks. A copy of the survey instrument is attached. Information and cooperation from your firm will help OSHA develop the most practical and effective standard possible. To insure confidentiality, the survey information will be stored in a data base that will not permit individual firms or their responses to be identified.

The survey covers the following areas: medical surveillance programs, types of processes and operations, chemicals used, exposure assessment procedures including monitoring programs, hazard communication, engineering review of process and equipment safety, maintenance practices, employee training, assessments of ergonomics and other hazards, and recent injury and illness experience. We would appreciate your forwarding this letter to the person or persons in your organization best suited to respond to the survey.

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We are required by the Office of Management and Budget to inform you that the public reporting burden for this collection of information is estimated to average 60 minutes per respondent, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, please send them to both the Office of Information Management, Department of Labor, Room N1301, 200 Constitution Ave., N.W., Washington, DC 20210 and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

We look forward to talking to your firm about these issues.

Sincerely,

Gerard F. Scannell

Assistant Secretary for OSHA

Medical Surveillance Survey, OSHA

[INTERVIEWER INSTRUCTIONS: RECORD THE FOLLOWING INFORMATION]

Interviewer Number
Cell Category
Size Code (1-4)
Sequence Number (max. 600)
Call Record SIC
Number of Employees
[Reenter Sequence #]
[Reenter SIC]

INTRODUCTION

Hello. My name is _____ and I'm calling from KCA Research in Alexandria, Virginia. We are conducting a survey on behalf of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor to assess the current practices in industry in the use of Medical Surveillance, Exposure Assessment, Process Safety Management and Ergonomic programs. A letter was sent to your facility informing you of this survey.

As the letter indicated, we are interested in understanding the extent of health and safety programs in industry. We would like to emphasize that all responses will be kept strictly confidential. Respondents will not be identified by name in any reports or data compilations submitted to OSHA.

We are interested in collecting information about your firm at address. Should I direct my questions to you, or is there someone else in the facility with whom you would prefer I speak?

1. Our records show your firm to be in SIC code XXXX, which is _____. Is this correct?
 - a. yes
 - b. no
 - c. don't know If "a", go to Q4.
 - d. refused
2. How would you describe your line of business?
 - a. _____ (record verbatim)
 - b. don't know
 - c. refused
3. Do you happen to know what that SIC code is?
 - a. enter SIC _____
 - b. don't know
 - c. refused

4. Are you a publicly owned company?

- a. yes
- b. no
- c. don't know If "a", only continue if in an OSHA
- d. refused state-plan state. Otherwise, terminate.

5. In total, how many employees work at your establishment?

- a. _____ (record verbatim) (If zero or refused, terminate)

6. I'd like you to divide the employees at your establishment into four broad groups for me. The first group called administrative employees will be those who perform only administrative, managerial, clerical, sales, or similar functions. The second group called production employees would be those who have at least some responsibility for producing the goods or providing the service of your establishment. Included in this group will be custodial employees. The third group called laboratory employees would be those who work in laboratories, including those that perform quality control, R&D, or various testing activities for your company. The fourth group called maintenance employees would be those that perform non-custodial maintenance and repair activities. Do not include contract workers. How many employees are: (record all that apply)

- | | | |
|-----------------------------|---------------|-------|
| a. administrative employees | Record number | _____ |
| b. production employees | Record number | _____ |
| c. laboratory employees | Record number | _____ |
| d. maintenance employees | Record number | _____ |

7. Are contract workers used in this facility?

- a. yes
- b. no If "b, c or d", go to Q9.
- c. don't know
- d. refused

8. Which work is performed by contract workers?
(record all that apply)

- a. production
- b. non-janitorial maintenance
- c. clean-up maintenance
- d. laboratory
- e. pickup/delivery
- f. other _____ (record verbatim)
- g. don't know
- h. refused

9. I'm going to read a list of chemicals that many firms engaged in your line of business often use. I'd like you to tell me which, if any, of these chemicals are used at your location, how many employees are exposed, how much of each one you use in a year, and whether you perform medical surveillance for the chemicals. The term "medical surveillance" refers to the practice of providing physical examinations and medical tests to employees for the purpose of detecting the presence of injuries or illnesses that might be related to work activities. Do you use _____? (SIC-specific prompt list of chemical will be provided. Administrative establishments in manufacturing SIC's will be prompted with a separate list.)

CHEMICAL	NUMBER OF EMPLOYEES EXPOSED	ANNUAL USAGE (lbs. or gals./year)	MEDICAL SURVEILLANCE
A	_____	_____	_____
B	_____	_____	_____
C	_____	_____	_____
D	_____	_____	_____

Limit chemical response to 4 chemicals. Respondent will be prompted with a list of chemicals which are ordered according to toxicity.

If no chemicals are used at this facility, go to Q15.

10. Are there any other chemicals used that I did not mention?

A	_____	_____	_____
B	_____	_____	_____
C	_____	_____	_____
D	_____	_____	_____

Limit chemical response to 4 chemicals.

11. Do you have more than 10,000 pounds (or 1,500 gallons) of any flammables stored in one location at your facility?

- a. yes
 - b. no
 - c. don't know
 - d. refused
- If "b, c, or d", go to Q15.

12. Does this consist only of hydrocarbons that are used on-site for fuel?

- a. yes
 - b. no
 - c. don't know
 - d. refused
- If "a", go to Q15.

13. Does this include only flammables stored or transferred on-site only (i.e. not processed or sold)?

- a. yes
- b. no
- c. don't know
- d. refused

14. Are the flammable materials stored below their boiling point without the use of chilling or refrigeration?

- a. yes
- b. no
- c. don't know
- d. refused

OVERALL PLANT QUESTIONS

-ADMINISTRATIVE

The following questions pertain to administrative actions for potential health and safety hazards.

We would like to ask you some questions regarding medical surveillance practices.

15. Please tell me whether your facility has any of the following exams available to employees.
(record as many as apply)

- a. pre-employment examination
- b. routine periodic examination for employees exposed to hazardous chemicals
- c. routine periodic examinations for employees exposed to physical stresses (i.e. heat, repetitive motion)
- d. examinations for workers required to wear respirators
- e. routine examinations prior to termination of employment
- f. formal employee wellness program
- g. random drug testing
- h. other _____ (record verbatim)
- i. none
- j. don't know
- k. refused

If "i, j, or k", go to Q29.

16. Do you perform the following medical surveillance examinations? For which employees?

- | | |
|----------------------|---|
| (1) pre-employment | a. all employees |
| (2) routine periodic | b. production employees only |
| | c. only those employees covered by OSHA requirements for medical surveillance |
| | d. other _____ (record verbatim) |
| | e. don't know |
| | f. refused |

17. Please indicate which of the following tests are performed, the frequency of the tests performed and for whom.
(record as many as apply)

	FREQUENCY	TYPE OF EMPLOYEE
a. general physical examination	_____	_____
b. written medical and work history	_____	_____
c. audiometric examination	i. varies with age	
d. pulmonary function	ii. every 3-5 years	
e. complete blood count	iii. every 2 years	
f. serum chemistries	iv. every year	
g. urinalysis	v. other _____ (record)	
h. chest x-ray	vi. don't know	
i. cholinesterase activity	vii. refused	
j. musculoskeletal examinations		
k. other _____ (record verbatim)		
l. none		
m. don't know		
n. refused		

18. Are any of the workers at this facility required to wear respirators?

- | | |
|---------------|-----------------------------|
| a. yes | |
| b. no | |
| c. don't know | If "b, c, or d", go to Q20. |
| d. refused | |

19. Which of the following tests does your company give to workers who are required to wear respirators?
(record all that apply)

- | | |
|----------------------------------|--|
| a. general physical examinations | |
| b. pulmonary function | |
| c. chest x-ray | |
| d. stress test | |
| e. other _____ (record verbatim) | |
| f. don't know | |
| g. refused | |

20. Where is your company's medical surveillance program conducted?
- a. on site
 - b. off site
 - c. both on and off site
 - d. don't know If "d, or e", go to Q22.
 - e. refused
21. Who implements your company's medical surveillance program?
- a. certified occupational physician
 - b. other licensed physician
 - c. certified occupational nurse
 - d. other registered nurse
 - e. licensed practical nurse
 - f. other _____ (record verbatim)
 - g. don't know
 - h. refused
22. Does your company have a formal arrangement with any of the following outside sources to provide medical surveillance services?
- a. occupational health clinic
 - b. other clinic, hospital, or HMO
 - c. private physician
 - d. mobile medical van service
 - e. insurance carrier
 - f. other _____ (record verbatim)
 - g. none
 - h. don't know
 - i. refused
23. How long are the medical records retained?
- a. duration of employment
 - b. duration plus X number of years (record "X")
 - c. other _____ (record verbatim)
 - d. don't know
 - e. refused
24. Does your company systematically review the medical records each year?
- a. yes
 - b. no
 - c. don't know If "b, c, or d", go to Q26.
 - d. refused

25. Are employee exposure assessments and monitoring data available to the individual conducting this review?

- a. yes
- b. no
- c. don't know
- d. refused

26. Do you use the medical surveillance results to implement or to change the following programs?
(record all that apply)

- a. exposure monitoring
- b. training
- c. engineering controls
- d. personal protective equipment
- e. workstation analysis for ergonomic hazards
- f. other _____ (record verbatim)
- g. don't know
- h. refused

27. Are employees notified of the results of their medical examination?

- a. yes
- b. no
- c. don't know
- d. refused

28. On average, how many hours is an employee away from work to take a medical examination?

- a. 1 hour
- b. 2 hours
- c. 3 hours
- d. other _____ (record verbatim)
- e. don't know
- f. refused

I would now like to ask you some questions concerning monitoring for potentially hazardous substances.

29. Do you have an exposure monitoring program?

- a. yes
 - b. no
 - c. don't know
 - d. refused
- If "b, c or d", go to Q41.

30. For which employee do you perform exposure monitoring?
(record all that apply)

- a. administrative
- b. production
- c. laboratory
- d. maintenance
- e. other _____ (record verbatim)
- f. don't know
- g. refused

31. Which of the following types of potential hazards are covered under your exposure monitoring program? What percentage of your exposure monitoring is related to that hazard?
(record all that apply)

- a. substance specific OSHA regulated substances, which include asbestos, benzene, formaldehyde, ethylene oxide, cotton dust, coke oven emissions, and lead.
- b. z-table chemicals
- c. other substances
- d. biological agents
- e. noise
- f. radiation
- g. other _____ (record verbatim)
- h. don't know
- i. refused

32. Who performs the exposure monitoring?

- a. company staff
- b. outside consultants
- c. insurance carriers
- d. other _____ (record verbatim)
- e. don't know
- f. refused

33. Does your facility perform any of the following monitoring techniques for substances that are easily absorbed through the skin?

- (1) surface wipe sampling
- (2) skin (gauze) patch sampling
- (3) biological monitoring (taking blood or urine samples to determine absorption)
- (4) other _____ (record verbatim)

- a. yes
- b. no
- c. don't know
- d. refused

If "a" for #2, continue. Otherwise go to Q35.

34. How many dermal (patch) samples were collected at this facility during the past year? For how many exposed workers? (record all that apply)
- a. number of samples _____
 - b. number of exposed workers _____
 - c. don't know
 - d. refused
35. For all types of monitoring do you use the results to implement or to change the following programs? (record all that apply)
- a. additional monitoring
 - b. training
 - c. engineering controls
 - d. personal protective equipment
 - e. medical surveillance
 - f. other _____ (record verbatim)
 - g. none
 - h. don't know
 - i. refused
36. Do you compute any of the following statistics from your monitoring data? (record all that apply)
- a. average
 - b. arithmetic standard deviation
 - c. geometric mean
 - d. geometric standard deviation
 - e. maximum exposure observed
 - f. other _____ (record verbatim)
 - g. none
 - h. don't know
 - i. refused
37. What percent of all monitoring samples result in overexposure?
- a. _____ percent
 - b. don't know If answer "a" is = 0 or b or c, go to Q39.
 - c. refused
38. How do you define overexposure? (record all that apply)
- a. > PEL
 - b. < PEL but > 1/2 PEL
 - c. > TLV
 - d. > ceiling/excursion
 - e. > STEL
 - f. other _____ (record verbatim)
 - g. don't know
 - h. refused

39. Does your company notify workers of their monitoring results?

- a. yes
- b. no
- c. don't know
- d. refused

40. Are monitoring results communicated to contract employees?

- a. yes
- b. no
- c. don't know
- d. refused

The following questions pertain to a company's procedure for assessing potential exposure to health, safety and stressor hazards. We will refer to this as an exposure assessment.

41. Do you perform any of the following exposure assessment elements?

(record as many as apply)

- a. workplace inventory of chemical agents
- b. workplace inventory of physical and biological agents and ergonomic stressors
- c. grouping of jobs by hazard for control or evaluation
- d. qualitative ranking of exposure risks.
- e. documentation of qualitative exposure assessment results
- f. development of quantitative exposure monitoring strategy or protocol
- g. exposure monitoring/sampling
- h. evaluation of monitoring results
- i. records of exposure assessment program
- j. reevaluation of exposure assessment based on new regulation, employee complaint or health effects data
- k. reevaluation of exposure assessment after changes in chemical used or changes in process
- l. reevaluation of exposure assessment based on seasonal changes
- m. other _____ (record verbatim)
- n. none
- o. don't know
- p. refused

If "n, o, or p", go to Q47.

42. For which employees do you perform an exposure assessment?
(record all that apply)
- a. administrative
 - b. production
 - c. laboratory
 - d. maintenance
 - e. other _____ (record verbatim)
 - f. none
 - g. don't know
 - h. refused
43. What percentage of your facility's workers are included in your exposure assessment program?
(record all that apply)
- a. administration _____
 - b. production _____
 - c. laboratory _____
 - d. maintenance _____
44. Who performs this exposure assessment?
- a. company staff
 - b. outside consultants
 - c. insurance carriers
 - d. other _____ (record verbatim)
 - e. don't know
 - f. refused
45. Do you maintain records of the results of the exposure assessments that are performed at your facility?
- a. yes
 - b. no
 - c. don't know
 - d. refused
46. Which of the following activities are initiated as a result of your exposure assessment program?
(record all that apply)
- a. employee exposure monitoring
 - b. medical surveillance
 - c. use of personal protective equipment
 - d. implementation of process change or engineering controls
 - e. development of internal exposure guidelines
 - f. toxicology testing
 - g. other _____ (record verbatim)
 - h. don't know
 - i. refused

47. As a result of conducting a medical surveillance program or an exposure assessment program, including use of monitoring if applicable, has your company noticed any of the following changes? What is the estimated percent change?
(record all that apply)

- a. reduction in illness by _____
- b. reduction in injuries by _____
- c. reduction in insurance costs by _____
- d. reduction in legal expenses by _____
- e. increased productivity by _____
- h. other _____ (record verbatim)
- i. don't know
- j. refused

48. Do you have a hazard communication program in place for the following employees?
(record all that apply)

- a. administrative
 - b. production
 - c. laboratory
 - d. maintenance
 - e. other _____ (record verbatim)
 - f. none
 - g. don't know
 - h. refused
- If "f, g, or h", go to Q50.

49. Which of the following is included as part of your hazard communication program?
(record all that apply)

- a. overview of the standard
- b. hazards of routine and non-routine jobs
- c. use and location of MSDS
- d. explanation of labels
- e. health hazard evaluation of the chemicals produced or used
- f. protective equipment requirements
- g. other _____ (record verbatim)
- h. don't know
- i. refused

50. Do you have a formal emergency response plan in place?

- a. yes
- b. no
- c. don't know
- d. refused

51. Does your facility have a written safety program?

- a. yes
- b. no
- c. don't know If "b, c or d" go to Q59.
- d. refused

52. Which of the following is included in the safety program?
(record all that apply)

- a. material hazards information
- b. lockout/tagout procedures
- c. hot work procedures
- d. personal protective equipment use
- e. remedial action for exposures
- f. confined space entry procedures
- g. special procedures for opening process equipment and piping
- h. other _____ (record verbatim)
- i. don't know
- j. refused

53. How are safety rules communicated to employees?
(record all that apply)

- a. written
- b. oral
- c. classroom training
- d. on-the-job training
- e. informally
- f. other _____ (record verbatim)
- g. not communicated
- h. don't know
- i. refused

54. Who enforces the safety rules?
(record all that apply)

- a. supervisor
- b. safety director
- c. safety committee
- d. labor agreement
- e. other _____ (record verbatim)
- f. no one
- g. don't know
- h. refused

55. Is there a safety committee?

- a. yes
- b. no If "b, c, or d" go to Q58.
- c. don't know
- d. refused

56. Does the safety committee have representatives from:
(check all that apply)

- a. labor
- b. management
- c. other _____ (record verbatim)
- d. don't know
- e. refused

57. Has your company noticed any of the following changes as a result of implementing a written safety program? What is the estimated percent change?
(record all that apply)

- a. reduction in illness by _____
- b. reduction in injuries by _____
- c. reduction in insurance costs by _____
- d. reduction in legal expenses by _____
- e. increased productivity by _____
- h. other _____ (record verbatim)
- i. don't know
- j. refused

58. Do you issue hot work permits at your facility? .

- a. yes
- b. no
- c. don't know
- d. refused

If "b, c or d" go to Q60. --

59. How many permits do you issue annually?

- a. _____ per month
- b. don't know
- c. refused

-ENGINEERING RELATED

We would now like to ask you questions concerning engineering-related procedures to correct or control safety and health hazards.

60. For the following types of process situations, do you perform a pre-startup safety review?
(record all that apply)
- a. for new processes?
 - b. for modified processes where only procedures or methods of operation have changed
 - c. for modified processes where process equipment has been changed.
 - d. other _____ (record verbatim)
 - e. none
 - f. don't know
 - g. refused

If "e, f, or g", go to Q65.

61. Does the pre-startup safety review check that:
(record all that apply)
- a. construction meets the specifications
 - b. safety, operating and maintenance procedures are adequate and in place
 - c. the prerequisites for startup are completed
 - d. training of operator is complete
 - e. other _____ (record verbatim)
 - f. don't know
 - g. refused
62. Does your facility have written procedures to address changes made with respect to:
(record all that apply)
- a. the chemicals used in a process
 - b. the technical information about a process
 - c. the design of an existing piece of equipment or system
 - d. other _____ (record verbatim)
 - e. none
 - f. don't know
 - g. refused

If "e, f, or g", go to Q65.

63. Which of the following does the written procedure address?
(record all that apply)

- a. the technical basis for the change
- b. the impact on safety and health
- c. modifications to operating procedures
- d. requirements for authorizing the change to be made
- e. other _____ (record verbatim)
- f. don't know
- g. refused

64. How do you inform workers of procedural changes either to the process they perform or the equipment they operate?

- a. written
- b. oral
- c. classroom training
- d. on-the-job training
- e. other _____ (record verbatim)
- f. none
- g. don't know
- h. refused

65. How often are facility safety inspections conducted?

- a. daily
- b. weekly
- c. monthly
- d. other _____ (record verbatim)
- e. never
- f. don't know
- g. refused

-WORK PRACTICE RELATED

66. Do you have any personnel whose sole or primary duty is to inspect and test equipment?

- a. yes
- b. no
- c. don't know
- d. refused

67. Do you use maintenance workers to do the following?
(record all that apply)

- a. routine maintenance
- b. repair of breakdowns
- c. inspection and testing
- d. maintenance support
- e. specific projects
- f. turnaround (cleanup, etc.)
- g. other _____ (record verbatim)
- h. don't know
- i. refused

68. Are operators expected to perform routine maintenance on their equipment?

- a. yes
- b. no
- c. don't know
- d. refused

-PPE

69. Are workers required to use personal protective equipment at your facility?

- a. yes
- b. no
- c. don't know
- d. refused

If "b, c, or d", go to Q72.

70. Is there a written policy addressing the selection, use and limitations, decontamination, maintenance, and storage of the personal protective equipment?

- a. yes
- b. no
- c. don't know
- d. refused

71. Have all employees who are required to wear personal protective equipment been trained upon initial assignment, biennially, and after a major job or process change?

- a. yes
- b. no
- c. don't know
- d. refused

-TRAINING

72. Is it company policy to train workers in the operating procedures of the process they work with or perform?

- a. yes
- b. no
- c. don't know
- d. refused

If "b, c, or d" go to Q80.

73. What types of workers receive this training?
(check all that apply)

- a. all employees
- b. all production employees
(including supervisors)
- c. new employees
- d. production workers assigned to a process unit or work activity where they have not previously worked.
- e. contract employees
- f. maintenance employees
- g. other _____ (record verbatim)
- h. don't know
- i. refused

74. Does training for non-contract employees address the following topics?
(record all that apply)

- a. potential hazards of the process
- b. procedures and safe practices applicable to the process
- c. emergency response
- d. proper use of personal protective equipment
- e. general safety rules of the facility
- f. changes to the process they work with
- g. other _____ (record verbatim)
- h. don't know
- i. refused

75. Do contract employees receive a briefing (or short training session) which addresses the following topics? (only ask if answered "e" in Q73.)
(record all that apply)

- a. potential hazards of the process
- b. procedures and safe practices applicable to the process
- c. emergency response
- d. general safety rules of the facility
- e. other _____ (record verbatim)
- f. don't know
- g. refused

76. How often are training sessions scheduled?

- a. monthly
- b. as needed If "a" go to Q78.
- c. new hires
- d. other _____ (record verbatim)
- e. don't know
- f. refused

77. How many training sessions are given each year?

- a. number of sessions _____
- b. don't know
- c. refused

78. Typically, how many people attend a training session?

- a. number of workers _____
- b. number of trainers _____
- c. don't know
- d. refused

79. How long does each training session last?

- a. _____ hours (or fraction thereof)
- b. don't know
- c. refused

PROCESS ORIENTED

80. OSHA has constructed a breakdown of processes that might be analyzed separately during a hazard analysis. I'm going to read a list of processes that many firms engaged in your type of business often have. I'd like you to tell me which, if any, of these processes are present at your facility. Also, if your company groups these processes for hazard analysis purposes, please give me your list. Do you have a _____? (SIC-specific prompt list of processes will be provided).

- (1) process a
- (2) process b
- (3) process c (etc.)

81. Are there any other processes present that I did not mention?

- (1) process a
- (2) process b
- (3) process c (etc.)

Now I am going to ask questions about elements related to the processes you mentioned. (Certain processes will prompt certain questions or parts of a question.)

82. Do you have a set procedure for compiling technical information on individual processes?

- a. yes
- b. no
- c. don't know
- d. refused

If "b, c, or d", go to Q90.

83. Have you compiled any of the following types of information for individual processes?
(record all that apply)

- a. process flow diagram
- b. process chemistry
- c. maximum intended inventory of hazardous chemicals
- d. safe upper and lower limits for operating procedures
- e. safety and health results of operating outside these limits
- f. equipment design information
- g. written operating procedures
- h. other _____ (record verbatim)
- i. none
- j. don't know
- k. refused

84. Which of the following are addressed in your operating procedures for individual processes?

- a. temporary operations
- b. emergency operations including emergency shutdown
- c. start-up following downtime
- d. safety equipment available for use with this process
- e. the function of that safety equipment
- f. measures to be taken if physical contact or airborne exposure occurs
- g. other special or unique hazards associated with this process
- h. other _____ (record verbatim)
- i. don't know
- j. refused

85. Does someone review the operating procedures for agreement with the following?
- (1) hazardous chemical information for this process
 - (2) technical design information for this process
 - (3) equipment design information for this process
- a. yes
 - b. no
 - c. don't know
 - d. refused
86. Have the employees working with a process unit received training in operating procedures specific to the process unit?
- a. yes
 - b. no
 - c. don't know
 - d. refused
87. How much time is spent in initially training each employee in operating procedures?
- a. _____ (record verbatim)
 - b. don't know
 - c. refused
88. Are formal inspections and tests of critical equipment in each process conducted periodically?
- a. yes
 - b. no
 - c. don't know
 - d. refused
- If "b, c or d", go to Q90.
89. How many days of work (man-days) are spent on inspecting and testing critical equipment each month?
- a. _____ (record verbatim)
 - b. don't know
 - c. refused
90. When changes are made in the technology of an operation, is the compiled information updated to reflect the change?
- a. yes
 - b. no
 - c. don't know
 - d. refused
- If "b, c or d", go to Q92.

91. Are employees informed of such changes?

- a. yes
- b. no
- c. don't know
- d. refused

PROCESS LOOP

Now, I would like to ask you questions for each of the processes you mentioned earlier.

92. How many workers at this location participate in "process a"?

- a. _____ workers (record verbatim)
- b. don't know
- c. refused

93. How many processes of this type do you have?

- a. _____ (record verbatim)
- b. don't know
- c. refused

94. Does this process have any of the following engineering controls?
(record all that apply)

- a. general ventilation
- b. local exhaust ventilation
- c. laboratory exhaust ventilation
- d. noise reduction control
- e. enclosure
- f. other _____ (record verbatim)
- g. none
- h. don't know
- i. refused

95. Have you performed any of the following hazard analyses of this process? If yes, for which employees?
(record all that apply)

- | | |
|-----------------------------------|-------------------|
| (1) ergonomic analysis | a. administrative |
| (2) exposure analysis | b. production |
| (3) fire, explosion prevention | c. laboratory |
| (4) spills prevention | d. maintenance |
| (5) other _____ (record verbatim) | |
| (6) none | |
| (7) don't know | |
| (8) refused | |

If did not answer "(1)", go to Q99.
If answered "(6), (7), or (8)", go to Q104.

96. Which of the following elements is included in your ergonomic analysis?
(record all that apply)
- a. analyzing injury and illness records for evidence of cumulative trauma disorders
 - b. cataloging work content
 - c. analyzing work content with respect to potential biomechanical risk factors for cumulative trauma disorders
 - d. measuring and documenting time required to perform each work task
 - e. analyzing production records
 - f. video taping jobs
 - g. developing check-lists to identify undesirable worksite conditions or worker activities that contribute to cumulative trauma disorders
 - h. developing study of the work environment
 - i. other _____ (record verbatim)
 - j. don't know
 - k. refused
97. What actions have you taken resulting from the information generated by the ergonomic analysis?
- a. redesign work methods
 - b. redesign workstation
 - c. substitution of tools
 - d. other _____ (record verbatim)
 - e. don't know
 - f. refused
98. Have you noticed any reduction in absenteeism, turnover or insurance claims as a result of these ergonomic changes?
- a. yes
 - b. no
 - c. don't know
 - d. refused
99. Who performs the hazard analysis (ergonomics, exposure, fire or explosion, or spills)?
- a. in-house staff
 - b. outside consultants
 - c. combination of both
 - d. other _____ (record verbatim)
 - e. don't know
 - f. refused

100. Are written reports prepared for each hazard analysis that is performed?
- a. yes
 - b. no
 - c. don't know
 - d. refused
101. Which of the following does this analysis include?
(record all that apply)
- a. a description of the results
 - b. a list of recommendations
 - c. the actions taken as a result of the hazard analysis
 - d. other _____ (record verbatim)
 - e. don't know
 - f. refused
102. How many days of work (man-days) are required to perform the hazard analysis, including providing a written report?
- a. _____ (record verbatim)
 - b. don't know
 - c. refused
103. Are hazard analyses performed on process units before they are started or restarted?
- a. yes
 - b. no
 - c. don't know
 - d. refused
104. What type and number of air samples were collected during the calendar year for how many exposed workers?

	<u># of samples</u>	<u># of exposed workers</u>
Personal		
a. full shift		
b. short-term		
c. peak		
General area		
d. full shift		
e. short-term		
f. peak		

END OF LOOP

105. Did your establishment have any lost time occupational injuries or illnesses recordable on OSHA Form 200 during 1988 and 1989?

- a. yes
- b. no
- c. don't know
- d. refused

If "a", request copies of the OSHA 200 log and any supplemental forms they may have. Give address.