

**DIVISION OF OCCUPATIONAL SAFETY AND HEALTH  
POLICY AND PROCEDURES MANUAL**

**DIRECT READING  
REPORT**

P&P C-93  
Issue Date:  
6/30/94  
Revised: 8/1/94,  
7/1/95

**AUTHORITY:** Not applicable.

**POLICY:** It is the policy of the Division of Occupational Safety and Health to record data required to support a health violation document direct reading sampling performed by compliance personnel on the OSHA Form 93.

**PROCEDURES:**

**A. USE**

1. The Direct Reading Report provides compliance personnel with a standard document for recording the data required to support a health violation when a direct reading instrument (other than the Noise Dosimeter or Sound Level Meter) is utilized to measure the hazard. The OSHA Form 93 consolidates calibration records, sampling data and post-sampling analysis into one form. A copy of the front of the form serves as an input document for the IMIS. See Attachment A.
2. Compliance personnel shall use the OSHA Form 93 to document all direct reading data used to support a violation.

**B. SPECIAL ISSUES**

**1. Passive Sampling Devices**

Compliance personnel shall use the OSHA Form 93 to document exposures measured by passive sampling devices which can be read directly. Use the Air Sampling Report, OSHA Form 91, to document samples which require lab analysis.

**2. More than One Direct Reading Instrument**

Since more than one direct reading instrument often will be used to document an exposure, space has been allotted for the calibration of up to three instruments. Care must be taken, however, to ensure that the

pre- and post-sampling calibration data for a given instrument are all in the same block on the form.

### 3. Media Sensitive to More than One Agent

If using media that is sensitive to more than one agent, but only one agent is determined to be present, report the exposure against that specific substance code. If several agents are present, report the exposure against a substance code for the general category of substances, for instance, general aldehydes.

### 4. Leakage Tests

When documenting leakage tests, only Items 33, 34 and 36-38 need to be completed within the pre- and post-sampling calibration data on the reverse side of the form.

### 5. Date Stamps

Date stamps may be used for all the date entries on this form.

## C. OFFICE PROCEDURES

1. Compliance personnel shall complete the OSHA Form 93 according to the instructions set forth in Section E.

NOTE: If more space is required, compliance personnel shall use additional OSHA Form 93s. On each additional OSHA Form 93, mark through the pre- printed Sampling Number and enter the Sampling Number from the first form used. Then complete Items 22-31, as necessary, renumbering the line numbers in Item 21. Complete Item 32 on the first form and leave this item blank on the additional forms. Use as many OSHA Form 93s as are necessary and staple the forms together before submitting them to OMDS.

2. After completion of the OSHA Form 93, compliance personnel shall give the Form 93 to Office Support Staff for submission to OMDS for data entry. See Attachment B.

## D. FORM DISTRIBUTION

1. Office Support Staff shall mail each Form 93 to OMDS when they receive the Form 93 from compliance personnel.
2. The original OSHA Form 93 shall be placed in the employer case file.

## E. FORM COMPLETION

### MOD/Date

Complete this item only when it is necessary to change an OSHA Form 93 previously submitted to OMDS. If modifications to the Form 93 are made, compliance personnel shall mark the modifications in red ink on the Form 93, enter "M" in the MOD box, enter the date of the modification in the "DATE" box and give the modified Form to Office Support Staff for submission to OMDS.

#### 1. Reporting ID

The Reporting ID of the submitting office.

#### 2. Inspection Number

Enter the Inspection Number from the related Cal/OSHA Form 1.

#### 3. Sampling Number

A preprinted number unique to each OSHA-93. It identifies each sampling experience. This number must always be used when modifying the information on a sampling form.

#### 4. Establishment Name

Enter the name of the establishment as it appears on the Cal/OSHA Form 1.

#### 5. Person Performing Sampling (Signature)

The safety engineer or industrial hygienist who is performing the sampling must sign or initial the sampling form to verify that the method(s) prescribed by the Cal/OSHA IH Tech Manual have been followed.

#### 6. SE/IH ID

Enter the SE/IH ID of the person actually performing the sampling.

7. Survey Date

Enter the month, day and year the sample(s) were collected.

8. Employee (Name, Address, Telephone Number)

Enter the name, address (including ZIP Code) and telephone number of the employee being sampled.

9. Job Title

Enter the job title of the employee being sampled. The job title must be descriptive, concise (no more than 20 characters) and legible. If this is an area sample, enter the job title of the employee(s) who are most at risk from exposure. If one cannot be determined, enter the area of the worksite sampled.

10. Occupation Code

If known, enter an appropriate occupational code that corresponds to the job title in Item 10.

11. PPE (Type and Effectiveness)

Enter the type(s) and the effectiveness of any personal protective equipment (PPE) the sampled employee is using, including the manufacturer's name and model number, the approval number, if available, and the type and concentration of the contaminant against which it protects. If no PPE is in use, enter "None."

12. Exposure Information

a. Number.

Enter an estimation of the number of employees who are suspected to be over exposed to the hazard. Include the sampled employee as well as employees potentially over-exposed on all shifts. This number represents a subjective assessment of the scope of the exposure problem at the time the samples were taken.

Enter this number only once for each hazard area by entering the appropriate number on the first OSHA Form 93 for a particular

hazard area and leaving this item blank on all subsequent OSHA Form 93s for the same area.

It is essential that this number not be repeated on sample forms relating to the same hazard area. Repeated entries will result in multiple counting and will invalidate the IMIS data.

b. Duration.

Enter the length of time that the alleged violation has existed. This number indicates how long the hazard(s) has existed, not how long the sampled employee has been exposed to the hazard. It is not necessary to enter the duration on all OSHA Form 93s for an area unless the information is different.

c. Frequency.

Describe, as concisely as possible, the general frequency of exposure in the sampling area. Convey the complete picture for all over exposed employees, not just that of the sampled employee. This may require several frequency descriptions and the number exposed at each frequency.

EXAMPLE: 2 for 8 hrs/day, 8 for 3 hrs/week or 3 for 10 hrs/week.

13. Weather Conditions

Enter, when necessary, the temperature, altitude and other weather conditions existing during the sampling period which may affect the sample data.

14. Photo

If a photo(s) was taken, circle "Y."

15. Interferences

Identify any known or suspected substances or conditions (for example, magnetic fields) present during sampling which might affect the sampling results. If no interferences are present, draw a slash through this item.

## 16. Job Description, Operation, Work Location(s) Ventilation and Controls

Enter a detailed description of the work environment of the sampled employee including all pertinent information about the work being performed, such as the operation, the equipment associated with the hazard (including identifying numbers), and the work location(s). Include information such as the employee's activities during non sampling periods when it might affect the exposure, general observations of work practices and environment, unusual events which compliance personnel observe. Be sure to include observations on the following when they affect exposure or the issuance of a citation:

- a. Employee comments, recorded verbatim if possible, on the exposure (including how long they have worked at the job and the frequency of their exposure to the hazard) or the employer's health and safety program. Be sure to include notes on symptoms exhibited or mentioned by the employee.
- b. Account of employee movements and duties in each area of the plant.
- c. Typical production rate, rate on day of survey, machine speed, specific item being made, etc.
- d. Notes on visible dust, fumes, vapors, etc.
- e. Source of exposure.
- f. Ventilation and other significant air movements affecting contaminant concentrations. Include descriptions and measurements.
- g. Refer to all pages with additional sampling data (either OSHA's or the employer's) related to this exposure, for example, screening samples taken previously.
- h. Refer to all pages with documentation of records related to this exposure, e.g., Log 300 or medical records.
- i. Engineering and/or administrative controls, present and feasible.
- j. Employer knowledge of the hazard.
- k. Other employer information. If the employer neither created nor controlled the hazardous condition, state the name of the responsible party and the relationship to the employer.

Begin your description here and continue on the back or on additional pages, such as the OSHA Form 94. Always precede the continuation with the appropriate item number and indicate to which sampling form it relates, e.g.,

"Jones-item 16" for the job description of employee Jones who is the subject of the test, or

"p. 4-16" for Item 16 on field page number 4, or

"26120-16" for the continuation of Sampling Number 26120).

Cont'd. When the case file has been organized and the pages numbered, enter the case file page number(s) in the "Cont'd" box to indicate where any continuation page for this job description can be found. This is not necessary if the continuation page directly follows the sample form.

## DIRECT READING DATA

### 17. Substance/Agent

Enter the substance for which the sample is being taken.

### 18. Time

Enter the time(s) the instrument is turned on or turned off, or the time of each reading.

### 19. Reading

Enter the reading of the instrument or detector tube.

### 20. Location and Remarks

Enter the specific location at which each reading was taken. Note the employee's activity at that moment and any other observations, such as the employee's proximity to the hazard. Include here or on continuation pages, an explanation of your sampling strategy or the standard method used. In that explanation, be sure to reference the substance or agent to which the strategy or method relates.

If more than one instrument is used for the same substance, the instrument relating to each reading must be identified. Figure XXV-1 shows samples for carbon monoxide taken with both detector tubes and an analyzer.

## EXPOSURE SUMMARY

After sampling has been conducted and analyzed, complete the Exposure Summary (Items 21-32) whether or not a citation will be issued. If the samples documented on an OSHA-93 do not meet the criteria for submission to OMDS (reference paragraph B of this chapter), write "VOID" or some other sign across the exposure summary box, signifying that these forms will not be sent to OMDS.

21. Line Number

Enter a sequential number used to identify a particular exposure in the computer record. Each unique exposure must be assigned a line number and this number must be used in referring to individual records for modifications or retrieval.

22. Substance Code

Enter the appropriate hazardous substance code. See Attachment E, P&P C-170 & 170A.

23. Sample Type

Enter a code from among those listed below to indicate what kind of sample was taken.

A=Area

P=Personal

24. Exposure Type

Enter a code from the following list to indicate the kind of exposure being reported.

C=Ceiling

D=Dose

F=Not Detected (N/D) or Not Found (N/F)

L=Short Term Exposure Limit

P=Peak

T=Full Shift TWA

V=Not Valid

Not Detected or Not Valid. If none of the above codes apply because no substance could be detected, enter "F" in this item. If the sample was considered invalid for some reason, for instance, it was contaminated at



the site, enter "V" in this item. If either "F" or "V" is entered in this item, leave Items 25 through 29 blank.

More than One Type of Exposure for the Same Substance. If a TWA, ceiling and/or peak are calculated for the same substance code, each value must be entered on a unique line.

More than One of the Same Exposure Type for the Same Substance. If more than one ceiling, peak or other exposure type is calculated for the same substance code, enter only the "highest" exposure for each type measured.

25. Exposure Level

Enter the exposure determined by sampling. TWAs shall be based on the full shift and must be entered regardless of whether an overexposure exists.

26. Units

Enter the appropriate code from the following list to indicate the unit of measure in which the exposure level and the PEL are expressed for the substance identified in Item 22.

P=Parts per million  
M=Milligrams per cubic meter  
R=Millirems  
W=Milliwatts  
U=Milliwatts per square centimeter  
G=Million particles per cubic foot  
C=Picocuries per liter (radon)  
o=Specify Unit(s)

NOTE: If the Exposure Level or PEL is expressed in micrograms, it must be converted to milligrams before submittal to OMDS.

27.PEL

Enter the appropriate PEL or other standard against which the exposure is being evaluated. The PEL entered here must correspond to the type of exposure reported in Item 24. If the exposure is evaluated in relation to an Action Level, enter the Action Level here. (Be sure to use the appropriate substance code in Item 22.) If the PEL must be adjusted

because of a novel work schedule or other unusual circumstance, enter the adjusted PEL. If there is no level against which to evaluate the exposure, enter zero (0) in "PEL" and leave "Severity" Item 29, blank.

28. Adjusted

Mark if the PEL was adjusted; if not, leave blank.

29. Severity

Enter the severity of exposure, for example, Full Shift TWA divided by PEL, calculated to two (2) significant figures. This value must be recorded even if it is less than 1.

30. Citation Information

Mark as many of the following box(es) as apply regarding citation issuance.

No Citation. No citation was issued as a result of this sample.

FTA (Failure to Abate). An additional penalty was assessed for the employer's failure to abate a previous violation.

Over Exposure. A citation was issued for over-exposure to the hazardous substance identified in Item 22.

Engineering. A citation was issued for lack of or faulty engineering and/or administrative controls.

PPE (Personal Protective Equipment). A citation was issued for lack of, or faulty, personal protective equipment.

Training. A citation was issued for lack of adequate training.

Medical. A citation was issued for lack of medical surveillance.

Other. A citation was issued for other reasons.

31. Additives

If substances, due to their similar physiological effects, are considered additive, and if a citation results from the additive effects, enter the line

numbers from Item 21 (i.e., 1, 2, 3, etc.) of the substances identified in Item 22 that are additive.

On the same line, under "Severity" Item 29, enter the equivalent exposure for the mixture, as referenced in 29 CFR 1910.1000(d)(2)(i). This value is equivalent to the sum of the severity ratios for each substance contributing to the additive effect. Then mark an "X" in the appropriate box(es) under "Citation Information," Item 30.

32. Total Number of Lines

Enter the total number of line entries made in the Exposure Summary section. This total includes both the total number of entries made in Item 22, and Item 31, if completed. If multiple pages are used, enter on the FIRST page the total number of lines entered on all related pages of the OSHA Form 93, then leave this item blank on all the subsequent pages.

NOTE: This item must also be completed if the Exposure Summary is being modified.

Case File Page

When the case file is organized, the sampling forms and their continuation sheets should be placed immediately behind the Worksheet, OSHA Form 1B, to which they relate. All sample forms which do not support a violation should be placed together at the back of the case file. After the case file has been organized, all of the pages should be numbered sequentially according to current office filing procedures.

PRE-SAMPLING CALIBRATION (See the back of the OSHA-93)

If compliance personnel use the Cal/OSHA Form 1E, all pertinent information must be transferred to the OSHA Form 93.

33. Instrument (Type, MFG, Model Number, SN)

Enter the type of direct reading instrument being calibrated, its manufacturer's name and model number, and its serial number.

34. Location/T & BP

If the instrument is calibrated in the office, enter "OFFICE." If calibrated elsewhere, enter the address of the location at which the calibration is performed. If more than one instrument is used for a given exposure documentation and they are calibrated at the same location, enter the location for the first instrument and enter "SAME" in Item 34 for the additional instruments. Include temperature and barometric pressure, when necessary.

If all the instruments are calibrated at the same location, the address should be noted on the first form used and a slash drawn through this item on subsequent forms.

35. Calibration Source

Describe completely the calibration source used.

EXAMPLE: For the Ecolyzer: Eco-Span Gas, 51 ppm For the G.C.A.: 1.23 mg/M<sup>2</sup> GCA disc

36. Results

Enter the results of the pre-sampling calibration.

EXAMPLE: For the Ecolyzer: 52 ppm  
For the G.C.A.: 10 rdgs averaged: 1.22  
mg/M<sup>3</sup>  
For Leakage test: ok

37. Initials

The person performing the pre-sampling calibration must certify that standard calibration procedures have been followed by initialing the form in this space.

38. Date/Time

Enter the date and time of the pre-sampling calibration.

POST-SAMPLING CALIBRATION (See the back of the OSHA-93)

Be sure that each instrument's post-sampling calibration record is in the block to the right of its pre-sampling calibration record. If compliance personnel use

the Cal/OSHA Form 1E, all pertinent information must be transferred to the OSHA Form 93.

39. Calibration Source

Describe completely the calibration source used. (See the examples for Item 35.) If the same calibration source was used for the pre-sampling calibration, draw a slash through this item.

40. Location/T & BP

If the instrument is calibrated in the office, enter "OFFICE." If calibrated elsewhere, enter the address of the location at which the calibration is performed. If more than one instrument is used for a given exposure documentation and they are calibrated at the same location, enter the location for the first instrument and enter "SAME" in Item 39 for the additional instruments. Include temperature and barometric pressure, when necessary. Reference the IHTM for guidance.

NOTE: If all the instruments are calibrated at the same location, the address should be noted on the first form used and a slash drawn through this item on subsequent forms. If the pre- and post-sampling calibrations were both done at the same location, draw a slash through this item, but enter the temperature and barometric pressure, if needed, on the first form used.

41. Results

Enter the results of the post-sampling calibration. See the examples for Item 36.

42. Initials

The person performing the post-sampling calibration must certify that standard calibration procedures have been followed by initialing the form in this space.

43. Date/Time

Enter the date and time of the post-sampling calibration.

Attachments:

- A. [OSHA 93 Page One](#)  
[OSHA 93 Page Two](#)

B. [When to Submit an OSHA Form 93 to OMDS](#)