

Interoffice Communication

To Everitt Dewhitt
From Tom Grumbles
Date June 12, 1981
Subject SRI REPORT

Below are comments on the subject report. Basically, I feel they recommend more than we could utilize on any general basis.

SECTION A Contents of File

1. Supplying a CAS number for chemicals sampled would be difficult in some cases. Also, I don't see the benefit of this.
2. I doubt we would ever need a cost center designation.
3. Much of the information on how the samples were taken (calibration data, analytical information, etc.) will be kept at the plant level. This is of course required by the OSHA Records Access Standard. Also, with the purposes that are envisioned for the "corporate" computer system, I can't see why you would need some of that information.

SECTION B Generators of Data

I certainly agree with these comments and every effort will be made to assure valid data through training of personnel and quality control in the laboratory.

SECTION C Source Document

I agree with the content of this paragraph. To assure a consistent input format I would probably handle the data through this office and input to the corporate system. A standardized data input form could be developed for this.

SECTION D Output Reports

As we discussed at the meeting, I would want what the Chemicals system has now as a minimum. I believe you have examples of this, but I have enclosed examples to show form and content. The best situation would be to have the capability to determine the report format "on-line". This user generated format would give the greatest flexibility for data analysis and manipulation. However, this would only be useful to me if I had CRT access to the system in Houston.

Everitt Dewhitt

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The capability of generating employee notification letters based on sampling results is a desirable one, but we need to look at the regulatory time frame for notification. This probably will be best to handle on a local or plant level.

The other aspects are listed as optional. This would not be utilized by Chemicals if available today, however they may be necessary in the future and should be considered.

Thomas G. Grumbles

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Enclosures

CONOCO CHEMICALS COMPANY
INDUSTRIAL HYGIENE MONITORING REPORT
LAKE CHARLES CHEMICAL PLANT

MARCH 1981

JOB TITLE: 2ND CONTROLMAN - METHYL CHLORIDE

JOB CODE: 7770

DATE	SAMPLE	DURATION (MIN)	METHYL CHLORIDE (PPM)	ETHYLENE OXIDE (PPM)	REMARK
04-09-80	80 MC 043	210	0.61		
06-26-80	80 EO 087	120		1.16	
12-30-80	80 EO 076	120		1.02	
12-30-80	80 EO 098	120		0.99	
12-31-80	80 EO 100	120		2.04	
12-31-80	80 EO 101	120		1.98	
12-31-80	80 EO 102	120		2.04	
12-31-80	80 EO 103	120		1.00	
12-31-80	80 EO 114	120		1.98	
12-31-80	80 EO 117	120		1.99	
12-31-80	80 EO 129	60		3.93	
01-23-80	80 MC 002	300	21.10		
01-23-80	80 MC 004	300	2.84		
02-11-80	80 MC 010	240	3.25		
02-21-80	80 MC 016	240	2.42		
02-21-80	80 MC 017	240	2.59		
02-26-80	80 MC 020	240	1.88		
02-26-80	80 MC 021	240	0.10		
03-10-80	80 MC 024	240	4.88		
03-10-80	80 MC 025	240	5.08		
03-18-80	80 MC 030	240	2.30		
04-09-80	80 MC 037	240	0.09		
04-17-80	80 MC 038	240	0.37		
04-29-80	80 MC 045	360	0.51		
05-20-80	80 MC 048	360	5.47		
05-20-80	80 MC 052	360	2.26		
05-30-80	80 MC 055	360	5.32		
06-05-80	80 MC 062	360	14.53		
06-12-80	80 MC 066	300	0.23		
06-12-80	80 MC 067	300	5.67		
07-03-80	80 MC 074	300	4.28		
09-18-80	80 MC 078	300	< 0.05		
09-18-80	80 MC 079	300	0.18		
09-18-80	80 MC 080	300	< 0.05		
10-28-80	80 MC 081	360	5.51		
10-28-80	80 MC 084	360	1.89		

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CONOCO CHEMICALS COMPANY
INDUSTRIAL HYGIENE MONITORING REPORT
LAKE CHARLES CHEMICAL PLANT
MARCH 1981

JOB TITLE: LOADER - METHYL CHLORIDE

JOB CODE: 777L

DATE	SAMPLE	DURATION (MIN)	METHYL CHLORIDE (PPM)	REMARK
02-11-80	80 MC 008	240	3.14	
02-14-80	80 MC 012	240	0.07	
02-21-80	80 MC 015	240	4.78	
02-26-80	80 MC 019	240	8.35	
03-10-80	80 MC 023	240	8.26	
03-18-80	80 MC 029	240	62.59	
04-09-80	80 MC 036	240	< 0.05	
04-17-80	80 MC 041	240	0.26	
04-22-80	80 MC 042	360	0.69	
04-29-80	80 MC 046	360	1.25	
05-20-80	80 MC 051	360	20.27	ABOVE CONOCO STANDARD
05-30-80	80 MC 054	360	0.31	
05-30-80	80 MC 056	360	0.69	
06-05-80	80 MC 061	360	9.19	
06-12-80	80 MC 064	300	20.69	ABOVE CONOCO STANDARD
06-25-80	80 MC 071	300	17.15	ABOVE CONOCO STANDARD
07-03-80	80 MC 075	300	4.96	

JOB TITLE: ANALYST - LABORATORY

JOB CODE: 649A

DATE	SAMPLE	DURATION (MIN)	ETHYLENE OXIDE (PPM)	REMARK
08-06-80	80 ED 058	120	7.05	
08-06-80	80 ED 059	120	0.05	
08-20-80	80 ED 080	120	< 0.02	
08-20-80	80 ED 083	120	< 0.02	
10-28-80	80 ED 086	120		

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TYPE C DATA

Possible Data Source(s)	Hazard/Hazardous Materials Tracking	Employee Tracking	Health Effects Tracking	Health Cost Tracking
Purchasing	(1) Hazardous Material Inventory			
Safety	(3) Violation/Serious Incident File		(6) Safety Accident/Injury Module	
Industrial Hygiene Toxicology	(2) Toxicology/Emergency Information Module	(4) Industrial Hygiene Monitoring File		
Personnel/Benefits		(5) Personnel System Extract Module	(7) Mortality Module	(11) Health Benefits Module
Medical			(8) Morbidity Module	
			(9) Health Examination Module	
			(10) Medical Visits File (Non-Scheduled Visits)	

Figure 1

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controlled before ill-health results. Detection of abnormal findings by medical evaluation presumes that workplace exposures have already impacted on the health of the individual; depending on the sensitivity and specificity of the medical test procedures, these changes may be irreversible.

From a regulatory standpoint, results of IH monitoring are used to determine compliance with occupational health standards. Currently, there are OSHA exposure standards for some 500 chemicals; of these, fewer than 25 have mandated medical surveillance requirements. In those few complete OSHA standards, the results of IH monitoring serve as a "trigger" and determine the level of medical, training, labelling, special control programs, etc. necessary to fulfill the requirements of the standard.

The major linkage that must be established to enhance the power of the IH module is a job code dictionary. This will be discussed in more detail in the section on personnel module.

The module may be expanded to include air and water pollution monitoring by the environmental group. Possible linkages with their data bases should be investigated.

A. Contents of File

- Results of IH sampling, e.g., mg/m^3 of lead as a TWA, ceiling, etc. Actual laboratory results expressed as mg are optional. (Note: Allowance should be made for multiple results from a single physical sample and for combining several samples to calculate a single TWA.)
- CAS number of contaminant
- Selected sample identification information, e.g.,

date of sample

sample number

facility (plant)

area designation for
area samples

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job title/job classification
and name of individual
sampled for personal samples

shift

cost center designation
(optional)

- Selected information on how the sample was collected and analyzed, e.g.,

who collected sample

method of collection
(e.g., membrane filter
and/or applicable method
number)

identification of equipment
used to collect sample (e.g.,
type, brand, serial number,
date of last calibration)

who (laboratory) analyzed
sample including date sample
submitted and date results
received

sample duration (i.e.,
minutes)

sample flow rate

volume of air sampled

? Reason for taking sample, e.g., routine, worker
complaint, leak detection, etc.

- Selected conditions while taking sample, e.g.,
normal or abnormal operations
- Evaluation of representativeness of sample and
applicability to other individuals in the same
or similar job titles/classifications

- Types of protective equipment worn, e.g., respirators, gloves, other protective clothing, hearing protection, goggles, etc.
- Comments (space should be allowed for a text string).

B. Generator(s) of Data

With the current organization of Conoco's industrial hygiene program, data will be generated primarily by local plant staff. As mentioned previously, these will most likely not be professional industrial hygienists. As sampling data are the only "hard data" in industrial hygiene, training of appropriate plant personnel and quality control are imperative.

C. Source Document

The source document for this file is the sampling data sheet which is partially completed at the time the sample is collected and fully completed upon receipt of the analytical results. As mentioned previously, there are no standardized Conoco sampling data sheets. As industrial hygienists prefer to develop and use their own data sheets, and these often vary with type of sample, reason for sampling, etc., it is probably contraindicated to impose standardized sampling data sheets on field personnel. Corporate IH should assure, however, that regardless of the format, the required data elements are recorded. For ease of data entry standardized input forms should be developed. Data entry can take place at the plant, division, or corporate level.

D. Output Reports

Numerous types of output reports are possible based upon the suggested types of data elements. Some examples of reports are outlined below. Discussions with Dr. DeWhitt and Mr. Skelton indicate that in general these should meet their needs from management and operational viewpoints. It should be stressed, however, that both Dr. DeWhitt and Mr. Skelton want the system to be an interactive one with considerable flexibility in user-generated reports.

(1) IH Sampling Report

For each sample collected, a report summarizing (selected) input information could be generated. In addition, this report should indicate applicable standards or guidelines (e.g., OSHA, ACGIH, and internal Conoco standards), flagged results (based on Conoco "action levels"), and % PEL.

The data needed for these comparisons would be contained in the Toxicology/Emergency Information Module.

These reports would be primarily for field staff files.

(2) Employee Notification of Results of Sampling

Several OSHA standards require that employees be notified of the results of IH monitoring on him or on individuals in the same job title/job classification.

These standards should be checked to determine content of the letter. Certain sample results may require professional IH intervention so the system cannot generate these letters strictly automatically. Administratively, the letter should be given to the worker by a local (plant) person as signature of receipt needs to be obtained.

(3) Summary Reports

Two general types of summary reports are needed. The first are automatically generated periodic summaries of IH sampling. The format and content are variable depending on the intended use. At a minimum, these should contain "action level" flags to alert division/corporate hygienists of potential problem

areas and be capable of expressing statistical information as ranges, arithmetic and geometric means and standard deviations, and/or frequency distributions. These will serve a primary function in management of field activities.

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The second type of report is user generated, thus content and format are variable. Many would involve linkages to other modules. These are primarily investigative and problem solving tools. The users will most likely be professional IH's and other corporate medical staff. Examples of these applications include: (1) quality control if a contract analytical laboratory or piece of sampling equipment is later determined to be unsatisfactory; (2) status determination in response to a new standards lowering permissible exposure limits; and (3) "mini-epidemiology" studies relating exposures to medical findings.

(4) Financial Reports (optional)

If cost center designation is included in input data, reports on distribution of IH efforts by cost center can be generated. Furthermore, if there is a cross-reference for IH procedures and dollar amount, these reports can be expressed in dollars.

(5) Scheduling Information (optional)

If a routine schedule for monitoring has been established and included in the materials inventory or toxicology files, the system should be capable of generating some sort of schedule information, e.g., the next sample on Mr. Jones should be collected in 6 months.

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