

Air Products

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Audit

Date 27 August 1980

INTEROFFICE
MEMORANDUM

AUG 28 1980 Subject Company Medical Audit

MEDICAL DEPT.

Audit No. 80-244 ✓

To L. B. Tepper

Corporate Medical

(Location, Organization, or Department)

From R. E. Bennett

Internal Audit

(Location, Organization, or Department)

cc: J. J. Baliker
J. T. Barr
A. D. Bizzarro
M. R. Chmura
D. H. Davies

R. E. Jones
A. H. Kaplan
G. E. Maurer
J. F. Posch
R. H. Schenck

Attached is the report resulting from our Company Medical Audit.

In accordance with standard practices, we ask that you respond to the recommendations of this report in writing within thirty days indicating actions taken, actions planned and expected dates of completion.

R E Bennett

REB:pmg

Attachment

(320)

AP00033260



AUDIT NO. 80-244

AUDIT REPORT

TO L. B. Tepper
FROM R. E. Bennett

DATE 27 August 1980

COPIES TO
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AUDIT OF Company Medical Audit
BY R. R. Brown

I. Introduction and Scope

The Internal Audit department recently completed a corporate medical and chemicals manufacturing operational audit dealing with OSHA compliance to vinyl chloride monomer (VCM) requirements at our polyvinyl chloride (PVC) plants. Our objectives were to:

1. Determine the extent of company compliance to OSHA requirements.
2. Evaluate the administration of the company medical programs relating to VCM.
3. Evaluate the effectiveness of the computerized systems which support our plant and medical staffs.
4. Evaluate the administration of VCM controls at our plant locations (Calvert City and Escambia).

II. Summary

While our audit revealed no OSHA violations at either plant, it is our opinion that certain existing conditions potentially could lead to inaccurate record keeping and erroneous management decisions. Specifically, the conditions noted were:

1. The medical procedures for VCM are not being applied uniformly at our PVC locations.

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2. The computerized medical system which tracks medical data, physical scheduling, VCM exposures, etc. is not being fully utilized by PVC field locations.
3. A common interpretation of the OSHA requirements for VCM does not exist among all areas involved in overseeing PVC operations.

III. Detailed Audit Findings and Recommendations

As a result of our review of the administration of our medical surveillance program at our PVC plants, we found that:

A. Medical procedures are not being applied uniformly at our PVC locations.

1. There are no specific company policies or procedures indicating when construction physicals are to be given or who should be getting them at our PVC plants. As a result, plant medical personnel are not sure all required physicals are being administered.
2. The format of the medical exam given to construction employees is different at our two plants. Calvert City uses several of the forms that are used for our own employees. Escambia uses a one page physical exam form, specifically designed for construction employees.
3. Calvert City performs 5-liver function tests for VCM; Escambia performs 6 (OSHA requires 5).
4. The grounds for medically declaring someone unfit for VCM work are different. At Calvert City, any two abnormalities in the 5-liver tests constitutes unfitness. At Escambia, one abnormality in the 6-liver tests constitutes unfitness for VCM work.
5. The follow-up physicals for liver test abnormalities are different. Calvert City re-tests only the abnormal test(s); Escambia re-tests all of the 6-liver function tests and re-tests the person every six months for a period of 18 months.
6. Medical record retention is different. Calvert City maintains MID input forms, lab tests, physician's statements of fitness, and associated computer output. Escambia discards everything except lab tests and computer output.
7. For terminations, Calvert City retains the medical files. At Escambia, the medical files for terminations are forwarded to the Corporate Medical Department in Trexlertown.

FORM 2100-1 (REV. 9/75)

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Recommendations

Because of the above inconsistencies, we recommend the following:

1. The corporate medical department should establish and communicate to the field uniform standards for the following areas at all our plants:
 - Guidelines on which construction employees will be placed under our medical surveillance program and when they will receive abbreviated physicals.
 - The format of construction physicals including forms to be used, scheduling of exams, and follow-up testing to be conducted.
 - Guidelines on liver tests to be conducted, criteria for declaring an employee unfit and follow-up testing for company employees.
 - Retention requirements for medical records by the plant for employees and contractors. Also, disposition instructions for files of terminated employees.
- B. The existing medical information systems are not being efficiently utilized.
 1. The medical exam scheduling list (report A3C220) can not be used at either plant because it contains inaccuracies relating to the current listing of persons requiring physicals. The inaccuracies are not the result of any systems failure, but rather are due to incomplete data input and file maintenance. For example:
 - 33 of 49 current PVC plant employees at Escambia do not appear on this report.
 - 43 of 182 total persons listed on the report for Escambia have terminated.
 - 8 of 149 total persons listed on the report for Calvert City have terminated.
 2. The RAMADS system report (A3C505), which lists persons who entered a restricted area and whether they were/or were not authorized to do so is missing 50% of its total data because Calvert City no longer fills out the input form (regulated

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area access log-form 5583) which provides the data for this report. The remaining 50% of the report is currently being generated for Escambia since they still submit the input form (5583) to MID.

3. The VCM monitoring/exposure report (A3C130) is incomplete because Calvert City forwards the input forms (form 5576) to Trexlertown before all the required information has been put on the form (i.e., respirator usage and type).
4. The medical system reports do not include current contractor physicals. The medical exam scheduling list (report A3C220) shows 18 construction people at Calvert City. However, Calvert's plant medical department has 53 contractors who have received VCM physicals as of May, 1980. Escambia's exam scheduling list shows no contractor physicals.

Recommendations

Since extensive amounts of data are either missing or incomplete in the medical systems data base, the exposure exists that all the medical system reports are inaccurate, and thus we recommend:

1. With the assistance of MID, all reports from the medical system should be reviewed by the appropriate level of management to determine if their continuance is warranted in their present state.
2. Steps should be taken to upgrade the completeness and accuracy of the medical systems data bases.
3. The medical system users should determine if they need the RAMADS system report (A3C505).
4. The appropriate level of management should determine if contractor physical information is to be maintained on the medical system.

C. Area monitoring controls are not applied uniformly at our PVC locations.

1. The existing PVC area at Calvert City was designed to operate as a non-regulated area, and as a result, people are entering the PVC area without signing a regulated area access log or being monitored for medical clearance to enter the PVC plant. However, based on personnel monitoring data reviewed, indications are that VCM in excess of the permissible exposure

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limit (1 ppm in 8 hours - time weighted average or 5 ppm in 15 minutes - time weighted average), is being experienced in certain parts of the Calvert City plant and thus those areas should be regulated. At Escambia, the PVC area is regulated and the access log is still used. Also, a fence surrounds the PVC area at Escambia. Calvert City has no barrier surrounding their PVC area.

2. Area monitoring is required per the OSHA vinyl chloride standard-29 CFR 1910.1017 (g) (6) (ii). At Escambia, area monitoring readings are taken every 15 minutes by gas chromatographs. The readings are recorded on strip charts and are also evaluated and documented immediately by a minicomputer. At Calvert City, the gas chromatographs take readings every 20 minutes. However, the readings that appear on the strip charts are not evaluated until the following day. Calvert City's minicomputer could be used to perform this task with greater speed and efficiency but is currently not in use.

Recommendations

Because of the above inconsistencies, we recommend the following:

1. Those areas at Calvert City that have exhibited exposure readings in excess of permissible limits should be identified in order that appropriate measures can be taken to restrict access to such areas to authorized personnel only. Also, other appropriate access controls should be reinstituted.
2. The appropriate level of management should determine how area monitoring is to be handled (i.e., manually or computerized) and develop a plan to accomplish such monitoring. Such a plan should be coordinated between plant and support groups to ensure that it will adequately address OSHA requirements for VCM area monitoring.

All of the assistance provided by chemicals manufacturing, corporate medical, legal, and the plant staffs at Escambia and Calvert City was very helpful and greatly appreciated.