

Memorandum

San Francisco, CA
October 23, 1986

PLAINTIFF'S EXHIBIT

CHV-774

OSHA ASBESTOS COMPLIANCE GUIDELINE
File 126: Compliance Guidelines
Asbestos

SF&H CONTACTS:

The Federal Occupational Safety and Health Administration (OSHA) promulgated two new Asbestos Standards on June 20, 1986; 1926.58 on construction activities and 1910.1000 on General Industry. Either of these standards can apply to Chevron facilities depending on the types of activities performed. Corporate Industrial Hygiene has developed an Asbestos Compliance Guideline to provide guidance to Chevron facilities on how to comply with the two standards, and interpretation of key provisions of the two standards. The attached letter on the two new standards, and the Executive Summary of the Guideline has been sent to all Officers and Department Heads.

These two new standards will affect all Chevron facilities covered by OSHA in which maintenance and other activities result in employee exposures to asbestos. The two standards contain a number of new requirements and changes from the previous standard which will require immediate action to comply. Both standards establish a new Permissible Exposure Limit of 0.2 fibers/cc and a new Action Level of 0.1 fibers/cc. The standards include new requirements on employee exposure monitoring, regulated areas, special work procedures, engineering controls, and training. In addition, most of the program requirements under the previous standard have been expanded, e.g., respiratory protection, medical surveillance, hygiene facilities, and lunchrooms.

The Guideline consists of three parts. Part I provides the general approach for determining which of the two standards applies to a specific operation and a summary of the principal requirements. Part II contains a detailed outline of the various requirements included in the two standards. Part III indicates how to apply these standards to contractors working at Chevron facilities. A copy of the text of each of the two standards (including appendices) are also attached.

Corporate Industrial Hygiene is available to provide assistance in applying the Guideline, and in determining which requirements apply to specific operations. If you have any questions on the Guideline, please contact Norm Zeiser at (415) 894-6916 or John Hatfield at (415) 894-5280.

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Attachments

cc: Mr. R. L. Arscott
Industrial Hygiene Staff - w/attachment

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ADEQUATE EXPOSURE MONITORING DATA

Initial Monitoring

As a guideline to obtaining adequate initial monitoring data, the following approach should be used. Collect a minimum of 5 samples for each set of operating factors including the following: job title, activity, type of operation, environmental conditions and specific contractor if more than one contractor is used. The data should include worst case conditions (i.e., highest exposures for the specific operation), and represent the range of exposures possible for a particular type of operation. Each sample should be collected for the full time period during the shift the employee is exposed to asbestos. Corporate Industrial Hygiene is available to provide assistance in reviewing monitoring results and in determining if additional initial monitoring is needed.

Example 1: Three employees are involved in activities resulting in asbestos exposure. One employee is involved in cleanup of asbestos waste and the other two employees are involved in a separate activity; removing the asbestos from a pipe. Monitoring data should be obtained as follows:

- o 5 personal sample results for the cleanup activity, collected on five different days
- o 5 personal sample results for the asbestos removal activity, collected on five different days, using either or both of the two employees for monitoring.

This data should be collected for each type of operation. For example, asbestos removal on pipe would be one operation; additional monitoring results would be needed for a different operation such as asbestos removal on a vessel. The monitoring results should reflect varying conditions that would affect exposure levels including weather, number of hours worked, types of controls used and different work procedures.

Example 2: Eight employees are involved in maintenance work resulting in asbestos exposure. The employees are split between two shifts (6 on first shift, 2 on second) and are involved in 3 different job activities; 2 activities on first shift and a third on second shift. Monitoring data should be obtained as follows:

- o 5 personal sample results for the first job activity on first shift, collected on five different days
- o 5 personal sample results for the second job activity on first shift, collected on five different days
- o 5 personal sample results for the third job activity on second shift, collected on five different days.

The data can be collected using any of the employees involved in each job activity. The data should reflect the range of exposure levels including worst case conditions.

Follow-Up Monitoring

After the initial monitoring described above has been performed, follow-up monitoring is required for any activities resulting in exposures above the Action Level.

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protective equipment is used, ensuring that employees are trained in the appropriate methods of exposure control and use of the hygiene facilities and decontamination procedures, ensuring that engineering controls in use are functioning properly.

Decontamination Area: An enclosed area adjacent to the regulated area consisting of an equipment room, shower area, and clean room, used for decontamination of employees and equipment.

Demolition: The wrecking or taking out of any load supporting member, and any related razing, removing, stripping of asbestos.

Equipment Room: A room within the decontamination area that is supplied with impermeable bags or containers for disposing of contaminated clothing or equipment.

High Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping 99.97% of all monodispersed particles of 0.3 micrometers in diameter.

Regulated Area: An area established by the employer to demarcate the area where asbestos exposures could exceed the PEL. The regulated area can be of two types; (1) a temporary enclosure as required by (e)(6) or (2) an area demarcated to minimize the number of employees exposed.

Removal: Taking out or stripping of asbestos.

Renovation: The modification of any existing structure or portion in which asbestos exposure may result.

Repair: Overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates where asbestos is present.

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PART II

FED-OSHA CONSTRUCTION ASBESTOS STANDARD - 1926.58

DETAILED OUTLINE

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a. Scope and Application

This standard applies to construction activities which can result in asbestos exposures including: demolition of tanks, vessels, or towers containing asbestos; asbestos insulation removal or replacement; construction, repair or maintenance of structures, buildings, vessels, tanks containing asbestos; cleanup and disposal, transport or containment of asbestos wastes or other products containing asbestos.

See the discussion in Part I on how to apply this standard to Chevron operations.

b. Definitions

Action Level: An airborne concentration of asbestos of 0.1 fibers/cc calculated as an 8 hour time weighted average (TWA).

Asbestos: Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these that have been chemically treated or altered.

Clean Room: An uncontaminated room having facilities for the storage of uncontaminated clothing and other equipment.

Competent Person: A person capable of identifying asbestos hazards in the workplace and the authority to take prompt corrective action to eliminate them as outlined in the standard. Duties include: Establishing the negative pressure enclosure, ensuring its integrity, controlling entry and exit, supervising employee exposure monitoring, ensuring that appropriate

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c. Permissible Exposure Limit (PEL)

No employee shall be exposed to more than 0.2 fibers/cc as an 8 hour TWA.

d. Communication Among Employers

All employers on site shall be notified of any regulated areas and requirements if work is done inside the areas.

e. Regulated Areas

1. General: Establish regulated areas for work areas where exposures could exceed the PEL.

2. Demarcation: Identify the regulated area using a visible means to indicate the boundaries (e.g., yellow tape).

3. Access: Only authorized people may enter the regulated area.

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Chevron facilities should ensure this is done either by the contractor or by Chevron personnel.

If adequate monitoring data is not obtained by January 20, 1987, asbestos exposures should be assumed to exceed the PEL and handled as regulated areas until monitoring data is obtained. Based on previous monitoring at Chevron facilities, exposures during asbestos removal can be well in excess of the PEL if good work practices and careful techniques are not used when working with asbestos.

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4. Respirators: Anyone entering a regulated area must wear an acceptable respirator.
5. Prohibited Activities: Eating, drinking, smoking or chewing tobacco or gum is prohibited in regulated areas.

6. Asbestos removal, renovation or demolition:

- i. Whenever feasible, a negative pressure enclosure shall be established for these activities.
- ii. A competent person must be designated for these activities to set up the enclosure; control entry and exits from the enclosure; supervise the job; and ensure that proper procedures, protective equipment and controls are used.
- iii. The person designated must have specialized training on asbestos techniques and hazards of asbestos from a course such as an EPA Asbestos Course.
- iv. The above requirements for asbestos removal, renovation or demolition are exempted for small-scale, short duration jobs e.g., pipe repair, valve replacement, installing electrical conducts, or general building maintenance.

f. Exposure Monitoring

1. General: Exposure monitoring must be performed for all operations or activities which may result in employee exposures to asbestos. Personal, breathing zone samples must be collected to obtain data representative of full shift eight hour TWA exposures for each employee in each work area.

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If a contractor sets up a regulated area, Chevron personnel must also wear a respirator to enter the regulated area.

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This section defines asbestos removal, renovation or demolition operations as regulated areas regardless of exposure levels with the requirements shown (e.g., asbestos insulation removal).

This can be constructed from plastic but must be capable of maintaining a negative pressure.

A contractor can designate a competent person if he/she has been properly trained and has the authority for the various tasks indicated. A competent person is someone who by reason of experience and training is capable of identifying asbestos hazards in the workplace, and has the knowledge and authority to take action to eliminate the hazards. The duties of the competent person are described in the definition.

Corporate Industrial Hygiene can provide assistance in identifying the appropriate courses for individuals who need training

See the discussion in Part I.

See the discussion in Part I.

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2. Initial Monitoring:

i. Monitoring must be performed at the beginning of a job involving asbestos exposure.

ii. Objective data other than monitoring results can be used when appropriate, to show exposures are below the action level if the data is representative of worst case conditions.

iii. If adequate data from previous monitoring is available for similar jobs under similar conditions, it can be used instead of collecting new data.

Generally, the use of objective data in place of monitoring data will not be feasible for asbestos insulation removal, or renovation, or demolition of structures containing asbestos.

See the discussion on adequate data in Part 1 of this guideline.

3. Periodic Monitoring: Daily monitoring must be performed for employees working in either type of regulated areas unless supplied air respirators with pressure demand regulators are used.

4. Determination of Monitoring: After adequate initial monitoring results have been obtained, additional monitoring is not needed if the exposures are below the action level.

Daily monitoring is not required under 3. for either type of regulated area if the initial monitoring results for similar jobs show that exposures are consistently below the action level.

5. Method of Monitoring: The OSHA method in Appendix A of the standard must be used to collect monitoring data. The method specifies both sampling and laboratory analysis procedures to obtain acceptable quality for the data collected.

Sampling should be performed using the method for asbestos in the Chevron Industrial Hygiene Manual to meet the sampling requirements for the OSHA method. Samples sent to Corporate Industrial Hygiene for analysis will meet the analytical requirements.

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6. Employee Notification: All affected employees must be notified in writing of exposure monitoring results as soon as possible following receipt of the results. Notification can be provided either individually or by posting at a central location.

This is a requirement for all samples collected not just those exceeding the PEL. Affected employees would include employees in similar jobs who receive similar exposures to asbestos.

7. Observation of Monitoring: Employees or their representative must be provided an opportunity to observe any monitoring of employee exposure to asbestos. Observers must use appropriate protective equipment when inside a regulated area.

9. Method of Compliance

1. Engineering Controls and Work Practice
Engineering controls and/or correct work practices listed in the standard must be used to reduce exposures which exceed the PEL. Respiratory protection must be used to supplement these control techniques when they are not adequate by themselves.

The control techniques include many of the procedures and practices currently being used in Chevron facilities. Respirators cannot be relied upon as the only control used.

2. Prohibitions: High speed abrasive disc saws for cutting asbestos, compressed air for cleaning up asbestos and spray methods for applying asbestos cannot be used.

High speed disc saws can only be used if equipped with local exhaust ventilation.

3. Employee Rotation: Employee rotation cannot be used as a means of reducing employee exposures to asbestos.

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h. Respiratory Protection

1. General: Respirators must be used to control excess exposures when engineering controls and/or work practices are being developed or installed; are not adequate or are not feasible, or in emergencies.
2. Respirator Selection: NIOSH approved respirators must be selected from Table D-4 of the standard. Powered air purifying respirators must be provided to employees if they request them and will obtain adequate protection when using them.
3. Respirator Program: A respirator program must be established in accordance with 1910.134 which includes:
 - Employees may change the respirator filter whenever breathing resistance is detected.
 - Employees may leave the work area to wash their face and the respirator as needed to prevent skin irritation.
 - Employees cannot be assigned jobs requiring the use of respirators if a physician has determined during the most recent examination that they will not be able to function normally while wearing a respirator. In this case, the employee must be assigned to a task which does not require the use of a respirator, at the same pay, seniority and geographical location when such a position is available.
4. Respirator Fit Testing: Employees wearing negative pressure respirators must be fit tested at least every six months. Qualitative fit testing can only be used for half face negative pressure respirators. Quantitative fit testing is required for full face

Respirators do not have to be worn when exposures are consistently well below the PEL e.g., below the action level.

Only high efficiency respirators are acceptable. Disposable respirators including the 3M 8710 are not high efficiency nor acceptable for asbestos. Powered air purifying respirators include the Racal and 3M helmets.

The qualitative irritant smoke method of fit testing can be used with high efficiency respirators.

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i. Protective Work Clothing and Equipment

1. Provision and Use: Protective work clothing such as whole body clothing, head covering, gloves and foot covering must be used when employees are exposed above the PEL or when the possibility of eye irritation exists.

2. Laundering: If laundering is done, it must be performed so as to prevent exposures in excess of the PEL. Commercial laundries must be informed that the clothing contains asbestos and of appropriate precautions.

3. Contaminated Clothing: Must be transported in labeled bags or other labeled closed containers.

4. Asbestos Removal, Demolition or Renovation: The competent person must examine worksuits for rips or tears and mend them quickly if work is being done in a regulated area.

j. Hygiene Facilities

1. General: Clean change areas must be provided to employees working in regulated areas. The change areas must be provided with separate storage facilities for street and contaminated clothing. Employees involved in short duration, small-jobs can clean their work clothes with a HEPA equipped vacuum before leaving the regulated area in place of a change area. Lunch rooms with concentrations below the action level must be provided when exposures exceed the PEL.

If contractors perform the work, the facility should agree with the contractor where the clean area and lunch room are to be set up.

2. Asbestos Removal, Demolition, Renovation: A decontamination area consisting of a clean room equipment room, and shower area must be provided to employees involved in these activities. In addition, special entry and exit procedures must be established to contain any asbestos and ensure employees shower before leaving the area. These are not required for

See the discussion in Part 1 on small jobs.

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k. Communication of Hazards vs. Employees

1. Signs: Warning signs must be posted to demarcate regulated areas where exposures may be in excess of the PEL. Signs must read:

Danger
Asbestos
Cancer and Lung Disease Hazard
Authorized Personnel Only
Respirators and Protective Clothing Required in this Area.

2. Labels: Labels must be affixed to waste containers or asbestos products which can release asbestos dust. Labels are not necessary for bonded or encapsulated asbestos which will not release dust or products with less than 0.1% asbestos. Labels must read:

Danger
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard

3. Training: Annual training must be provided to all employees exposed above the action level. The program shall cover health effects of asbestos, how to recognize asbestos, increase risk from smoking and asbestos exposure, instructions or proper use of respirators, correct work practices, medical surveillance program and the standard.

4. Access to Training Material: Employees must be provided access to all written materials relating to training and to a copy of the standard.

A new videotape on asbestos "Asbestos" - Controlling The Hazard" covering most parts of the standards is available through Audience Planners (Contact: Susan Rafik at (818) 884 - 3100). It does not cover medical surveillance, the standard or all of the controls.

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l. Housekeeping

1. Vacuuming: If vacuuming is done, HEPA filters must be used and wastes handled carefully.

Most normal vacuum cleaners are not equipped with HEPA filters.

2. Waste Disposal: Asbestos waste must be disposed of in labeled bags.

m. Medical Surveillance

1. General: A medical surveillance program must be instituted for all employees exposed above the action level thirty or more days per year.

Medical surveillance programs should be set up in conjunction with Corporate Medical for Chevron employees.

2. Medical Examination: Must be provided annually for employees assigned to areas requiring negative pressure respirators, or following the 30th day of exposure. Content of the exam includes medical and work history, a standardized questionnaire, chest X-Ray and pulmonary function tests.

Chevron facilities should ensure that contractors are providing medical exams to employees meeting the exposure criteria. See the discussion on contractors Part II.

3. Information to the Physician: The physician must be provided with information on duties of the employee, exposure levels, protective equipment/respirator to be used and a copy of the standard.

4. Physicians Written Opinion: The physician must write an opinion on the following; any problems of concern relative to future asbestos exposures, limitations on employees use of respirators or other protective equipment, statement that employee has been informed of the results. The employees must be given a copy of the opinion within 30 days.

Coordinate with Corporate Medical in supplying the physicians written opinion to Chevron employees.

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n. Record Keeping

1. Objective Data: Any objective information used to determine that exposures are less than the action level and that initial monitoring is not needed must be kept for 30 years. This would include; name of the product, source of the information, any test results, the operation in question, other pertinent information.

2. Exposure Measurements: Exposure monitoring information must be kept for 30 years.

The GO-1055 monitoring form should be used to document the pertinent information including a written description of the operation.

3. Medical Surveillance: Medical surveillance records must be kept for 30 years.

Medical records will be kept by Corporate Medical for Chevron employees. Medical records for contractor employees should be kept by the contractor.

4. Training Records: Employee training records must be kept for one year after the last date of employment for the employee.

5. Availability: Exposure records must be made available to affected employees. Medical records must be made available to the employee or anyone with his/her written consent.

o. Dates

1. Effective Dates: The standard is effective July 20, 1986, except for parts C through N.

2. Startup Dates: The requirements in sections C through N are effective (must be in place) by January 20, 1987.

FED-OSHA GENERAL INDUSTRY ASBESTOS STANDARD: 1910.1001

DETAILED OUTLINE

REQUIREMENTS

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a. Scope and Application

This standard applies to all occupational exposures to asbestos not covered under the construction asbestos standard.

These include installing and replacing asbestos gaskets, packing, brake and clutch lining and normal day to day maintenance activities which may involve asbestos exposure. See part 1.

b. Definitions

Action Level: An airborne concentration of asbestos of 0.1 fibers/cc calculated as an 8 hour time weighted average (TWA).

Asbestos: Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these that have been chemically treated or altered.

High Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping 99.97% of all monodispersed particles of 0.3 micrometers in diameter.

Regulated Area: An area established by the employer to demarcate the area where asbestos exposures can exceed the PEL.

c. Permissible Exposure Limit (PEL)

No employee shall be exposed to more than 0.2 fibers/cc as an 8 hour TWA.

d. Exposure Monitoring

1. General: Exposure monitoring must be performed for all operations or activities which may result in employee exposures to asbestos. Personal, breathing zone samples must be collected to obtain data representative of full shift 8 hour TWA exposures for

It is not necessary to monitor every employee provided that the data collected are representative of each employee in each job title in each work area on each shift.

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each employee in each job title, in each work area, on each shift.

2. Initial Monitoring: Initial monitoring must be performed for all exposures which could (reasonably) be expected to exceed the action level. Previous monitoring results may be used if collected after December 20, 1985. Objective data other than monitoring results can be used to show that exposures are below the action level if the data represents the expected conditions of the associated job or activities.
3. Monitoring Frequency: Follow-up monitoring must be performed on a frequent enough basis to accurately represent exposures, but at least twice/year for exposures which may exceed the action level.
4. Changes in Monitoring Frequency: If adequate initial monitoring data indicates exposures are below the action level, no additional monitoring is needed for those exposures represented by the data.
5. Additional Monitoring: If changes in the operation, job, conditions etc., could result in new or additional exposures above the action level, additional monitoring must be performed.
6. Method of Monitoring: The OSHA method in Appendix A of the standard must be used to collect monitoring data. The method specifies both sampling and laboratory analyses procedures to obtain acceptable quality for the data collected.
7. Employee Notification: All affected employees must

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Jobs using new encapsulated asbestos containing products which are not cut, sawed, sanded or otherwise disturbed may be appropriate for using objective data in place of monitoring results. The type of information to collect would be the percentage of asbestos in the product, how it is encapsulated, the operation the product is used for, and any appropriate information from the manufacturer. Generally, activities which do not have adequate exposure data from previous monitoring, should be initially monitored.

Sampling should be performed using the method for asbestos in the Chevron Industrial Hygiene Manual to meet the sampling requirements for the OSHA method. Samples sent to Corporate Industrial Hygiene for analyses will meet the analytical requirements.

This is a requirement for all samples collected not just those

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be notified in writing of exposure monitoring results within 15 working days following receipt of the results. Notification can be provided either individually or by posting at a central location and must include the corrective actions being taken to reduce those exposures in excess of the PEL.

e. Regulated Areas

1. General: Establish regulated areas for work areas where exposures could exceed the PEL.
2. Demarcation: Identify the regulated area using a visible means to indicate the boundaries (e.g., yellow tape).
3. Access: Only authorized people may enter the regulated area.
4. Respirators: Anyone entering a regulated area must wear an acceptable respirator.
5. Prohibited Activities: Eating, drinking, smoking or chewing tobacco or gum is prohibited in regulated areas.

f. Methods of Compliance

1. Emergency Controls and Work Practices: Engineering controls and/or correct work practices listed in the standard must be used to reduce exposures which exceed the PEL. Respirator protection must be used to supplement these control techniques when they are not adequate by themselves. Compressed air cannot be used to remove asbestos from clothing or for cleanup.

2. Compliance Program: A written compliance program must be developed and implemented to reduce exposures which exceed the PEL by means of

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exceeding the PEL. Affected employees would include employees in similar jobs who receive similar exposures to asbestos.

If adequate monitoring data is not obtained by October 20, 1986, asbestos exposures should be assumed to exceed the PEL and handled as regulated areas until monitoring data indicating otherwise are collected.

If a contractor sets up a regulated area, Chevron personnel must also wear a respirator to enter the regulated area.

The control techniques include many of the procedures and practices currently being used in Chevron facilities. Respirators cannot be relied upon as the only control used.

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emergency controls, work practices and respiratory protection when these are not adequate. Employee rotation cannot be used as a means of reducing employee exposures to asbestos.

g. Respiratory Protection

1. General: Respirators must be used to control exposures above the PEL if engineering controls and/or work practices are being developed or installed; are not adequate or are not feasible, or in emergencies.

2. Respirator Selection: NIOSH approved respirators must be selected from Table 1 of the standard. Powered air purifying respirators must be provided to employees if they request them and will obtain adequate protection when using them.

3. Respirator Program: A respirator program must be established in accordance with 1910.134 which includes:

- Employees may change the respirator filter whenever breathing resistance is detected
- Employees may leave the work area to wash their face and the respirator as needed to prevent skin irritation
- Employees cannot be assigned jobs requiring the use of respirators if a physician has determined during the most recent examination that they will not be able to function normally while wearing a respirator. In this case, the employee must be assigned to a task which does not require the use of a respirator, at the same pay, seniority and geographical location if such a position is available.

4. Respirator Fit Testing: Employees wearing negative pressure respirators must be fit tested at least every

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Respirators do not have to be worn when exposures are consistently well below the PEL (e.g., below the action level).

Only high efficiency respirators are acceptable. Disposable respirators including the 3M 8710 are not high efficiency nor acceptable for asbestos.

The respirator program will require proper cleaning, maintenance, and storage of respirators, training of employees and other requirements in 1910.134.

The qualitative irritant smoke method of fit testing can be used with half mask high efficiency negative pressure respirators.

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6 months. Qualitative fit testing can only be used for half face respirators. Quantitative fit testing is required for full face negative pressure respirators.

h. Protective Work Clothing and Equipment

1. Provision and Use: Protective work clothing such as whole body clothing; head covering; gloves and foot covering; face shield, vented goggles or other eye/face protection must be used when employees are exposed above the PEL or when the possibility of eye irritation exists.

2. Removal and Storage: Employees can only remove contaminated clothing in change rooms. Contaminated clothing cannot be taken out of the change room except for laundering maintenance or disposal. Contaminated clothing must be placed in labeled bags for transport.

3. Cleaning and Replacement: Clothing must be cleaned, laundered or replaced to provide clean clothing to each affected employee at least weekly. Blowing or shaking clothing to remove asbestos is prohibited. If laundering is done, it must be performed so as to prevent exposures in excess of the PEL. Commercial laundries or others must be informed that the clothing contains asbestos and of the appropriate precautions when washing and handling the clothing. The clothing must be transported in labeled bags or other labeled containers.

i. Hygiene Facilities and Practices

1. Change Rooms: Employees exposed above the PEL must be provided clean change rooms. The change rooms must be provided with two separated lockers for street and contaminated clothing.

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Chevron facilities with exposures above the PEL must ensure that a clean change room with separated lockers is available for the exposed employees. If contractors are used, Chevron facilities should reach agreement with the contractor on the arrangements to be used for change rooms.

If contractors are used, they must have access to a clean change room - either Chevron's or a special set up. As a guideline of what to expect, exposure can be well in excess of the PEL if asbestos removal is performed for most of the

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2. Showers: Employees exposed above the PEL must be provided shower facilities and must shower at the end of the work shift. Employees cannot leave the work place wearing clothing worn during the work shift.

3. Lunchrooms: Positive pressure, filtered air supplied readily accessible lunchroom facilities must be provided to employees exposed above the PEL. Employees exposed above the PEL must wash their hands and faces before eating, drinking or smoking. Employees must remove contaminated clothing or remove the asbestos from the clothing by vacuuming or other acceptable methods before entering the lunchroom.

j. Communication of Hazards to Employees

1. Signs: Warning signs must be posted to demarcate regulated areas where exposures may be in excess of the PEL. Signs must read:

Danger
Asbestos
Cancer and Lung Disease Hazard
Authorized Personnel Only
Respirators and Protective Clothing Required in this Area.

2. Labels: Labels must be affixed to asbestos waste containers, or asbestos waste sumps, or asbestos products. Labels must read:

Danger
Contains Asbestos Fibers
Avoid Creating Dust

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shift (e. g. 6-8- hours), and if good work practices and careful techniques are not used. For short term jobs (e.g. less than 1 hour) with good controls, wet methods, the 8 hour TWA exposures would usually be below the PEL.

Contractor employees must have access to some kind of shower facilities. Chevron facilities should reach agreement with the contractor on the arrangements to be used.

Chevron lunchrooms may not meet the requirements for positive pressure and filtered air. If exposures exceed the PEL, modification to the lunchroom or other arrangements may be necessary.

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The terms tremolite, anthophyllite or actinolite may be substituted for asbestos when appropriate.

3. Material Safety Data Sheets: Manufacturers of asbestos products must comply with the Hazard Communication Standard.
4. Exemption For Labeling: Labels are not necessary for bonded or encapsulated asbestos which will not release a dust under foreseeable conditions, or for products with less than 0.1% asbestos.
5. Training: Annual training must be provided to all employees exposed above the action level. The program must cover health effects of asbestos, how to recognize asbestos, increased risk from smoking and asbestos exposure, instructions on proper use of respirators, correct work practices, medical surveillance program and the standard. Employees must be provided access to all written materials relating to training and access to a copy of the standard.

k. Housekeeping

1. All surfaces must be kept as free as possible of asbestos dust, waste.
2. All spills, releases of asbestos containing materials must be cleaned up as soon as possible.
3. Compressed air cannot be used to clean up surfaces.
4. Vacuuming: If vacuuming is done, HEPA filters must be used and wastes handled carefully.
5. Shoveling, dry sweeping, dry cleanup can only be used if wet methods are not feasible.

COMMENTS

A new videotape on asbestos "Asbestos" - Controlling The Hazard" covering most parts of the standards is available through Audience Planners (Contact: Susan Rafik at (818) 884 - 3100). It does not cover medical surveillance, the standard or all of the controls.

Most normal vacuums are not equipped with HEPA filters.

Dry sweeping and cleanup should not be used at Chevron facilities.

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6. Waste Disposal: Asbestos wastes, scraps, debris etc., must be disposed of in sealed, labeled bags.

1. Medical Surveillance

1. General: A medical surveillance program must be instituted for all employees who are or will be exposed above the action level.

2. Preplacement Examination: Before employees are assigned to jobs involving exposures above the action level, they must be provided a medical exam. The content of the exam must include medical and work history, a standardized questionnaire, chest x-ray and pulmonary function test.

3. Periodic Examinations: Annual exams must be made available to employees. Content of the exam is the same as preplacement except the x-ray frequency will be according to Table 2 in the standard.

4. Termination of Employment Examinations: A medical exam must be provided to employees exposed above the action level within 30 days prior to or after the last date of termination. Content of the exam will be the same as periodic exams.

5. Recent Exams: An exam for an employee as described above is not necessary if he/she has already had an exam within the last year with the same content and information.

6. Information to the Physician: The physician must be provided with information on duties of the employee, exposure levels, protective equipment/respirator used and a copy of the standard.

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Medical surveillance programs should be set up in conjunction with Corporate Medical.

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7. Physician's Written Opinion: The physician must write an opinion on the following; any problems of concern relative to future asbestos exposures, limitations on employees use of respirators or other protective equipment, statement that employee has been informed of the results. The employee must be given a copy of the opinion within 30 days.

m. Recordkeeping

1. Exposure Measurements: Exposure monitoring information must be kept for 30 years.

The G0-1055 monitoring form should be used to document the pertinent information including a written description of the operation.

2. Objective Data: Any objective information used to determine that exposures are less than the action level and that initial monitoring is not needed must be kept for 30 years. This would include; name of the product, source of the information, any test results, the operation in question, other pertinent information.

3. Medical Surveillance: Medical surveillance records must be kept for 30 years.

Medical records will be kept by Corporate Medical.

4. Training Records: Employee training records must be kept for one year after the last date of employment for the employee.

5. Availability: Exposure records must be made available to the employee or anyone with his/her written consent. Records must also be made available to OSHA.

COMMENTS

Coordinate with Corporate Medical in providing the medical opinion to employees.

REQUIREMENTS

COMMENTS

n. Observation of Monitoring

1. Employee Observation: Employees or their representative must be provided an opportunity to observe any monitoring of employee exposures to asbestos. Observers must use appropriate protective equipment when inside a regulated area.

o. Dates

1. Effective date: This standard becomes effective July 21, 1986 for all parts except the following:

2. Exposure Monitoring: Initial monitoring by October 20, 1986

Regulated Areas: Established as soon as possible but not later than November 17, 1986.

Respiratory Protection: Provided as soon as possible but not later than July 21, 1986 for exposure above 2.0 fibers/cc and November 17, 1986 for exposures above 0.2 fibers/cc. January 16, 1987 for powered air purifying respirators.

Hygiene and Lunchroom Facilities: Construction plans completed by January 16, 1987. Construction completed by July 20, 1987.

Training: Provided as soon as possible but not later than October 20, 1986.

Medical Surveillance: Provided by November 17, 1986.

Compliance Program: Written program completed by July 20, 1987.

Methods of Compliance: Implemented as soon as possible but not later than July 20, 1988.

PART III

APPLICATION TO CONTRACTORS

When contractors are used for jobs involving asbestos exposure, Chevron's responsibility for the various provisions under the asbestos standards will vary depending on whether the contractor is considered an independent contractor or a special employee. These two types of contractors are discussed below along with Chevron's responsibilities under the asbestos standards.

SPECIAL EMPLOYEE CONTRACTORS

These contractors work full-time at Chevron facilities on a variety of projects, often taking work direction from Chevron personnel, using Chevron equipment and following Chevron procedures.

Chevron facilities are responsible for ensuring that all parts of the applicable asbestos standards are being met either by the contractor or by Chevron. Chevron facilities may choose to assist this type of contractor in meeting many of the requirements if the contractor does not have the capability, e.g., monitoring, fit testing of respirators, change rooms, or hygiene facilities.

Alternatively, Chevron facilities may choose to require that the contractor meet most of the provisions of the standard without assistance. In many cases, this type of contractor will not be able to meet all of the requirements without assistance, e.g., lunchrooms, hygiene facilities may have to be provided by Chevron. Chevron facilities will still need to closely oversee the contractor to ensure that the provisions are being met and work with the contractor to correct any problems. Although Chevron facilities will not normally provide medical surveillance exams for contractor employees, they should ensure the contractor is providing medical surveillance when required under the asbestos standards.

INDEPENDENT CONTRACTORS

These contractors work at Chevron facilities for specific lengths of time on specific projects. The employees take most or all of their direction from contractor personnel, follow contractor procedures and use contractor equipment. In most cases, these contractors will be involved in specific projects which are outside the normal day-to-day maintenance activities and fall under the construction standard.

Chevron facilities are responsible for indicating to the contractor when asbestos exposure could be associated with a project, agreeing with the contractor on which asbestos standard should be followed and specifically indicating the various provisions to be met. An example of contract language for the construction standard that can be used is attached. In addition, Chevron facilities will need to work with the contractor in the following areas for work covered by the Asbestos Construction Standard:

1. Agreement with the contractor on whether adequate monitoring data has been collected by the contractor to reliably estimate exposures, whether daily monitoring is needed for construction activities,

and what controls are needed based on the monitoring results. If the contractor has not collected adequate data the exposures should be assumed to exceed the PEL and all applicable provisions of the standards should be followed.

2. Agreement with contractor on where regulated areas should be set up and how they will be demarcated.
3. Request that contractors will use proper procedures and controls, when appropriate, for asbestos insulation removal, renovation or demolition as required under section 1926.58(e)(6) and 1926.58(j)(2) of the Construction Asbestos Standard. Chevron facilities should discuss and reach agreement with contractors on whether negative pressure enclosures are feasible.
4. Chevron facilities should discuss and agree with the contractor on where decontamination areas are to be set up including the shower area. Chevron facilities should reach agreement with the contractor on whether an activity meets the "small scale, short duration" job exemption for the three requirements for type (1) regulated areas (see Part I).
5. Ensure that the contractor has a "competent" person if needed for asbestos removal, renovation or demolition as described in section 1926.58(3)(6)(i) of the Construction Asbestos Standard.
6. Agreement on whether Chevron lunchrooms and change rooms can be used by the contractor to meet the requirements of the asbestos standards. If they cannot be used by contractor employees, Chevron facilities should agree on the arrangements for meeting the requirements.
7. If contractor employees are found to be ignoring or out of compliance with the asbestos standards, Chevron facilities should treat this as a breach of contract and discontinue work, where practical, until the breach is remedied.

CONSTRUCTION STANDARD
SUGGESTED CONTRACT LANGUAGE
JOBS INVOLVING ASBESTOS EXPOSURES

This job involves the potential for employee exposures to asbestos. The contractor shall comply with all applicable requirements under the OSHA Construction Asbestos Standard 29 CFR 1926.58 including the following:

Permissible Exposure Limit - Employee exposures to asbestos shall not exceed 0.2 fibers/cc as an 8-hour time weighted average (TWA).

Regulated Areas - The contractor shall establish regulated areas as outlined in section 1926.58(e) of the Standard for those operations or activities where asbestos exposures could exceed 0.2 fibers/cc as an 8-hour TWA or where asbestos removal, renovation, or demolition is performed. The contractor may be exempted from the requirements under Section 1926.58(e)(6) for small-scale short-duration jobs only with Chevron's concurrence.

Exposure Monitoring - The contractor must perform exposure monitoring of asbestos exposures unless the contractor has sufficient results from previous monitoring during similar jobs to satisfy Chevron and meet 1926.58(f)(4). If the contractor does not have sufficient results, the exposures shall be treated as if they exceeded 0.2 fibers/cc as an 8-hour TWA and as if they occurred in regulated areas. The contractor shall make available to Chevron for review the results from any exposure monitoring performed during this job.

Controls - The contractor shall use the following controls to reduce exposures associated with activities in regulated areas:

- | | |
|---|------------|
| o Engineering controls and work practices | 1926.58(g) |
| o Respiratory protection | 1926.58(h) |
| o Protective clothing | 1926.58(i) |
| o Hygiene facilities | 1926.58(j) |

Communication of Hazards - The contractor shall use signs and labels to alert Chevron and contractor employees and others of the potential for asbestos exposure as required in 1926.58(k) and in a manner acceptable to Chevron. The contractor certifies that employees have received appropriate training on asbestos as outlined in the Standard within the last year.

Medical Surveillance - The contractor certifies that employees meeting the exposure criteria in Section 1926.58(m)(1)(i) of the Standard are included in an annual medical surveillance program.