

151988

CELANESE CHEMICAL COMPANY, INC.
TECHNICAL CENTER
Corpus Christi, Texas

PLAINTIFF'S
EXHIBIT
CEL-580

To: *As Listed February 8, 1985
From: D. A. Chadwick DAC-110-85

Respiratory Protection Policy and Program

ABSTRACT

CCCTC respirator policy states that employees wearing respirators must be clean shaven in facial areas forming a seal with the respirator. A qualitative fit test is being set up, and all employees wearing respirators will be tested for proper fit for each respirator issued. Employees needing or requesting a respirator need to contact me before a respirator will be issued to them. Reasons for this change and for instituting a clean-shaven policy for respirator users is explained in an attachment.

Uniterms
Health
Safety
Respirator
Respiratory
Protection
Policy
S-563

QUALITY MAKES A WORLD OF DIFFERENCE

008295

February 8, 1985

BACKGROUND

A copy of DOA-289-84 is attached which contains the respiratory protection policy for the Tech Center and a cover letter by David Anderson. As well as setting up procedures to support the policy, we have made some changes and will probably make other changes in the future to increase the strength of our overall respiratory protection program.

Since there have been many questions about the policy and other changes, I have given some basic information about respirators, legal requirements, and respirator programs in an attachment. An extra copy of the attachment is included to circulate to your employees who wear respirators.

DISCUSSION

Interpretation of the Policy

The policy is based on the company respiratory protection policy and requires that employees wearing respirators be clean shaven in the area where the respirator forms the facial seal, that facial hair not interfere with the exhalation valve, and that a quantitative fit test be performed for each type of respirator issued to a person.

This policy has been adopted as a result of court decisions which concluded that a good seal cannot be obtained with facial hair. The policy applies not only to employees required to wear respirators but also to employees who request respirators as an additional form of protection in situations such as working in hoods or equipment enclosures.

The air-fed acid hoods are not respirators since there is no seal. They are splash protection equipment with an air supply primarily for personal comfort although the air does offer some level of respiratory protection against a sudden release of contaminant. However, the acid hoods are not acceptable protection for continuing to work in a contaminated area after a release or for entering a contaminated area.

Quantitative Fit Test

The SH&E Department is setting up a quantitative fit test for respirators, and all employees who wear a respirator will be fit tested - this will be done for employees required to wear respirators and those requesting respirators. Meanwhile, employees wearing respirators should be clean shaven as described above.

008296

February 8, 1985

I need a list from each supervisor by February 15th of their employees who are required to wear respirators and a list of employees who currently use respirators as a personal choice. Qualitative fit tests will begin after the medical van pass on March 8 and 11th, and Carm will contact employees to schedule the test.

Distribution of Respirators

We have recently changed the procedure for distribution of respirators, and employees need to contact me first for selection of the proper respirator. Reasons for the change in procedure are described in the Attachment.


D. A. Chadwick

lnj
attachment

008297

Attachment to DAC-110-85

RESPIRATORS

Basic Types of Respirators

There are many variations but basically we have on-site air purifying and atmosphere supplying respirators. Air purifying respirators use cartridges or canisters to filter the air. Atmosphere supplying respirators use several different types of valve units to deliver supplied air: demand, pressure-demand, and continuous air.

When you inhale with an air purifying or demand type atmosphere supplying respirator, you cause the inside of the facepiece to become negative in pressure compared to the outside. This negative pressure is what causes the air to be sucked into the facepiece through the cartridge or canister on an air purifying respirator or trips the air feed valve on demand type atmosphere supplying respirators.

The pressure inside the facepiece is positive compared to outside for pressure-demand and continuous atmosphere supplying respirators. For pressure-demand type respirator the positive pressure is maintained by opening the exhalation valve when the pressure is too high or opening the air feed valve when the pressure is too low. Air is constantly fed into the facepiece in a continuous atmosphere supplying respirator.

Restrictions on Use

For some contaminants there are guidelines and for others legal requirements that specify what type of respirator or variation of a respirator type that can be used for different levels of contamination. There are also specifications about the types of canisters or cartridges that can be used on air purifying respirators for different contaminants.

The type of respirator used is also dependent upon whether the chemical has good warning properties - if you can't smell it then you won't know if it has broken through the filtering material in an air purifying respirator.

Some basic restrictions are that air purifying respirators cannot be used in oxygen deficient atmosphere, and air purifying and demand atmosphere supplying respirators cannot be used when the concentration of a contaminant is high compared to its safe concentration. Since continuous type atmosphere supplying respirators use large quantities of

008298

air, their use is self-limited to airline feed rather than portable air tanks, and there are restrictions on the use of airline respirators for working in high concentrations of a contaminant or for emergency escape.

Our SCBAs (Self Contained Breathing Apparatus) are all pressure-demand type units which can be used in a wider variety of situations than a demand type.

The Importance of a Good Face Seal

For air purifying and demand type atmosphere supplying respirators which rely upon negative pressure inside the facepiece, the air will take the path of least resistance to equalize the pressure inside and outside of a respirator facepiece and will quickly flow into the facepiece through any leaks. If the leak is small then some contaminated air will enter but eventually the pressure will fall to a low enough point to cause air to also enter through the canister or to trip the valve. But you will be breathing some contaminated air - how much will depend upon the size and number of leaks.

The significance of leaks in the face seal for a pressure-demand SCBA is that if pressure inside the facepiece is often or always too low then the air feed valve remains open all or most of the time. This would cause the air tanks on an SCBA to be drained very quickly and could be a major problem in an emergency response situation.

Interferences With a Good Facial Seal

There are several things which will prevent a good respirator fit such as hollow temples, prominent cheekbones, prominent nose, dentures, missing teeth, scars, and even talking and moving the head. The reason for doing a qualitative fit test is to find a respirator or respirators for each person that fits their facial structure as best possible and, therefore, makes the best facial seal.

Facial hair and even a few days growth of stubble between the sealing surface of the respirator facepiece and your skin will prevent a good seal. For air purifying and our demand type airline respirators, contaminated air will be sucked into the facepiece from the air spaces around the individual hairs.

For our pressure-demand SCBAs the tanks will be emptied much sooner than anticipated because the air feed valves will remain on longer than normal in an attempt to maintain positive pressure inside the facepiece against the outflow of air from the facepiece through these air spaces.

008299

February 8, 1985

Although there isn't a law about being clean shaven when using a respirator, there have been court cases where it was concluded that a good seal couldn't be obtained if there was facial hair in the area of the face that contacts the respirator.

Respiratory Protection Programs

Along with the respirator policy and the qualitative fit test for respirators there are other parts of an overall respiratory protection program. A respirator selection and bookkeeping procedure is required which assures that you aren't unknowingly using a respirator that offers little or no protection against a contaminant, that you aren't using a respirator which is in need of repair, and that the cartridges are fresh and appropriate for the contaminate.

We have set up a bookkeeping procedure to track what respirators and/or cartridges have been issued, what they're being used for, how long you've had them, when the cartridges were last changed, when they were last inspected for wear-and-tear and worn parts replaced, etc.

008300

Attachment to DAC-110-85

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February 8, 1985

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008302

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008303

*As Listed

CCCTC

G. J. Fisher
P. J. Volpe
R. F. Stubbeman
C. B. Shafer
D. O. Anderson
W. T. McNair
R. J. H. Voorhoeve
D. C. Porter
R. H. Scott
D. F. Ripple
P. G. Rasch
D. C. Deck
M. W. Kuralt
C. D. Hardin
H. L. Farek
R. M. Guedin
C. C. Hobbs
R. R. Graham
R. W. Rupp
P. B. DeGroot
C. J. Mazac
L. O. Wheeler
G. A. Blay
K. C. Ehrhardt
B. G. Gilleland
L. B. Levy
A. Aguilo
L. E. Wade
C. B. Hilton
J. D. Unruh
E. R. Witt
W. D. Alley
R. P. Lowry
J. S. Alder
S. C. Dalton
L. W. Hartman
T. M. Kenesson
E. R. Lock
L. G. Pesek
E. M. de la Garza
C. D. Murphy
J. Chosnek
B. N. Shah
D. W. Steele
R. G. Hilbrich
G. S. Nash
Central Files (3)

008304