RECORD #94

TITLE: Guidance Concerning 10 CFR 20.103 and Use of Pressure Demand SCBAs

FICHE: 38319-178

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 29 1984

MEMORANDUM FOR: Those on Attached List

FROM: LeMoine J. Cunningham, Chief
Section 2, Operating Reactor Programs Branch
Division of Quality Assurance, Safeguards,
and Inspection Programs
Office of Inspection and Enforcement

SUBJECT: UPDATED GUIDANCE ON FIT TESTING OF BIOPAK 60-P RESPIRATOR USERS

This letter provides updated guidance on fit testing of BioPak 60-P respirator users in response to inquiries from licensees and inspectors regarding implementation of previous guidance (memo to L.R. Greger, RIII, from L.J. Cunningham, IE August 8, 1983 - copy enclosed). Licensee and inspectors have inquired as to what constitutes an acceptable method for performing quantitative fitting of the wearers of this apparatus as required in footnote 1, to Appendix A of Part 20; specifically, is it acceptable to check the fit of the device (the face to facepiece sealing capability) by testing the user while the user is wearing just the facepiece equipped with a high efficiency filter supplied by the manufacturer of the device. Previous guidance stated that the wearer must don the entire unit for fit testing since it was felt that fitting the facepiece with a high efficiency filter that is capable of allowing no more than 0.03% leakage would preclude measurement of the required 0.02% leakage or less through the face to facepiece sealing area. However, the 0.03% leakage allowed for high efficiency filters is determined with a more penetrating aerosol (monodispersed) than used in fit testing. Therefore, it is possible to measure the 0.02% leakage accurately with the facepiece equipped with a high efficiency filter (0.02% leakage corresponds to a fit factor of 5000).

Requiring a fit factor of 5000 in the negative pressure air-purifying mode is too restrictive. This approach to fit testing allows no credit for protection provided by the positive pressure inside the facepiece generated by the device in its normal mode of operation. Positive pressure inside the facepiece can compensate for inward leakage of contaminants to some extent by ensuring air circulating through the device is leaked outward instead of leaking contaminants into the worker's breathing zone. However, in this device that protection is obtained at a large cost if the fit is poor and outward leakage is substantial because reduced service life results as outward leakage of air is made up from the small volume of oxygen carried by the user. The volume carried is sufficient to exchange the volume of carbon dioxide released in respiration with compressed oxygen. Carbon dioxide is removed from the circulating air by the sorbent scrubber.

A hard and fast number that delineates good from poorly fitting respirators is not available. In the opinions of many experts in the field of respiratory protection, 1000 seems to represent a reasonable number for distinguishing between good and poorly fitting respirators. It is recommended that licensees use this number as a guide for determining if an acceptable fit has been achieved with this device.

For those persons that are unable to attain a fit factor of 1000 with just the facepiece in negative pressure mode participation in emergency, potentially IDLH situations should be restricted. This person may experience drastically reduced service time which reduces emergency response capability as well as hindering escape from a potentially life threatening situation.

The intent of the previous guidance was not to verify proper functioning of the entire unit. The operability of the assembled unit is checked after maintenance and before each use. In addition, fit testing of workers wearing the assembled unit in the case of this apparatus was presenting other problems due to the low makeup volume and leakage detection interference from background water vapor droplets and particulates from the carbon dioxide scrubber system.

Based on the interference problem that has been reported and revaluation of the previous guidance it is now recommended that fit testing of wearers of the BioPak 60-P be performed with just the facepiece equipped with a high efficiency filter and that a factor of 1000 be considered an acceptable fit. A recommendation will be made to RES to update Appendix A to include the intent of this interpretation in the next rule change.

If you have any questions regarding this guidance please contact Lynnette Hendricks of my staff (492-9728) or Jim Wigginton, IE (492-4967).

LeMoine J. Cunningham, Chief
Section 2, Operating Reactor Programs Branch
Division of Quality Assurance, Safeguards
and Inspection Programs
Office of Inspection and Enforcement

Enclosure:
Memorandum L.R. Greger frm
L.J. Cunningham dtd. 8/8/84

Distribution:
DCS 016
ORPB reading
DQASIP Reading
J.N. Grace, IE
J.G. Partlow, IE
P.F. McKee, IE
L.J. Cunningham, IE
L. Hendricks, IE
S.L. Ramos, IE
J.E. Wigginton, IE
D.P. Allison, IE
R.L. Baer, IE
E.L. Jordan, IE
F. Congel, NRR
R. Serber, NRR
O. Lynch, NRR
R. Pedersen, IE
R. Neel, RES
R Alexander, RES

IE:DQASIP:ORPB
LHendricks:rlc
8/28/84

IE:DQASIP:ORPB
LJCunningham
8/29/84

ADL for P.F. McKee
8/29/84

James H. Joyner, Chief
Nuclear Materials and Safeguards Branch
Region I

Kenneth P. Barr, Chief
Nuclear Materials and Safeguards Branch
Region II

William L. Axelson, Chief
Nuclear Materials and Safeguards Branch
Region III

Ronald R. Bellamy, Chief
Radiological Protection Branch
Region I

Douglas M. Collins, Chief
Emergency Preparedness and Radiological Protection Branch
Region II

Carl J. Paperiello, Chief
Emergency Preparedness and Radiological Protection Branch
Region III

Ramon E. Hall, Chief
Technical Program Branch
Region IV

Frank A. Wenslawski, Chief
Radiological Safety Branch
Region V

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 18 1983

MEMORANDUM FOR: L. Robert Greger, Chief
Facilities Radiation Protection Section
Region III

FROM: LeMoine J. Cunningham, Chief, Section B
Engineering and Generic
Communications Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

SUBJECT: REQUESTED GUIDANCE ON FIT TESTING BIO-PAK 60 RESPIRATOR USERS

In response to your July 8, 1983 memorandum, we have worked with RES (Lynnette Hendricks) in forming the guidance for testing and use of the positive pressure, closed-circuit, self-contained breathing apparatus. We have also reviewed the applicable inspection report (50-266/83-03) which formed the basis for your request. Your questions are repeated below followed by the requested guidance.

1. Is it acceptable to fit test a worker for a closed circuit, positive pressure SCBA (Bio-Pak 60) using only the facepiece with an attached particulate filter, or must the entire SCBA be fit tested?

   No, this testing with only a particulate filter would be unable to demonstrate meeting the 0.02% leakage standard (Protection Factor of 5000) required by 10 CFR Part 20, Appendix A, footnote (L). High efficiency filters are generally only 99.97% effective (0.03% allowable leakage).

2. What protection factor (P/F) must be attained to demonstrate a successful fit of a closed circuit, positive pressure SCBA (Bio-Pak 60)?

   Closed-circuit, positive pressure SCBA's must be tested to demonstrate a P/F or fit factor of 5000 as required by Part 20. This current requirement was first discussed in IE Information Notice 81-26, Part 1: Use Of Recirculating - Mode (closed circuit) Self-Contained Breathing Apparatus (Rebreathers), dated August 28, 1981. As stated in IE IN 81-26, because of the small oxygen supply and the wide mask, a quantitive fit test is required by Part 20 to ensure this approved-for-emergency-use SCBA will provide its intended level of wearer protection.

CONTACT: Lynnette Hendricks
443-7970
Jim Wigginton
492-4967

3. If the licensee's fit test does not demonstrate a successful fit (i.e., a less protection factor than those listed in 10 CFR 20, Appendix A), is it acceptable to apply the measured protection factor without specific authorization by NRC?

   No, this is not an acceptable practice. The P/F's listed in Part 20 are conservative--any fit test result less than these conservative factors is an indication of an improperly functioning respirator and/or respirator-user problems.

If you have any questions concerning this guidance, please call either Lynnette Hendricks (RES) or Jim Wigginton (IE).

LeMoine J. Cunningham, Chief, Section B
Engineering and Generic
Communications Branch
Division of Emergency Preparedness
and Engineering Response, IE

cc: M. Shanbaky, RI
K. Barr, RII
P. Lovendale, RIII
B. Murray, RIV
F. Wenslawski, RV
L. Hendricks, RES
W. Cool, RES
O. Lynch, NRR
W. Fisher, IE
L. Cobb, IE
E. Blackwwod, EDO
J. Taylor

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

W. Fisher
~~Bob Gallo~~
~~Larry Bell~~
~~John J~~ good response
~~Mitzie~~ ; M&E Excellent response
Thoughts? Feel free to scribble on it.
Bill

SEP 8 1983

MEMORANDUM FOR: L. R. Greger, Chief
Facilities Radiation Protection Section
Emergency Preparedness
and Radiological Safety
Division of Radiological and
Materials Safety Program, Region III

FROM: LeMoine J. Cunningham, Chief, Section B
Engineering and Generic
Communications Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

SUBJECT: GUIDANCE CONCERNING 10 CFR 20.103 AND USE OF PRESSURE DEMAND SCBA's

This is in response to your April 19, 1983 memorandum requesting guidance on the above subject. The Region III licensee's proposed respiratory protection plan to allow bearded personnel to use pressure demand-SCBA's (provided that service time is not reduced to less than 20 minutes) has been discussed with RES (Lynette Hendricks), and NIOSH has been consulted. In your memorandum you stated your objection to the licensee's proposal but could find no clear regulatory basis for your objection. We support your objection and feel there is a strong technical basis for that objection.

We found several technical flaws in the licensee's proposal to deviate from the normal industry practice of requiring clean-shaven faces in the seal area of tightfitting respirators (see enclosed proposal). One serious problem is the potential for a user to "overbreath"; a person working under heavy physical and mental stress (such as firefighting efforts) can exceed the SCBA's air supply capability. When a beard-caused leak in the seal area exists, the additional "makeup" air is drawn from the outside atmosphere through the leak area. The proposal is silent on this problem.

Another problem is beard interference with the operation of the facepiece's exhaust (exhalation) valve. A beard can hold this valve open, and on a deep breath could allow outside, contaminated air to enter the facepiece. Also, on a normal volume inhalation an open exhaust valve could allow loss of air, thereby reducing the users's air service time. The licensee does not address this problem.

Technical Contacts:
Jim Wigginton, IE
49-24967
Lynette Hendricks, RES
443-7970

There is another case currently in the D.C Courts regarding a bearded fireman and his ability to wear a properly fitted face mask.

A major problem with the licensee's proposal centers on the high probability for increased outward leakage caused by beard interference with the seal. The Industrial Hygiene Support Group at Lawrence Livermore Lab (LLL) has noted during testing of bearded personnel that the SCBA advertised 30-minutes air supply (which normally lasts approximately 20 minutes) ran out in 10-12 minutes at a moderate work load. As reported in the enclosed article, "Facial Hair & Breathing Protection", "It must be emphasized again that facial hair characteristics change daily, so any test of facepiece fit or how long the breathing air cylinder will last on one day will be different on succeeding days." We and NIOSH believe that a daily quantitive fit test would probably be required to ensure adequate air supply service time for bearded users who have facial hair in the seal area. The administrative costs and problems with such a program seem to be tremendous.

Since the licensee has formally asked for Regional approval, we recommend you deny approval based on the above technical grounds. The proposed program does not provide sufficient assurance for preventing significant SCBA service-time reduction and is silent on the serious personal safety concerns involving overbreathing and exhausion valve interference for bearded users. Additionally, it is obvious that an impaired firefigher could reduce overall firefighting capabilities, with attendant potential for loss of accident mitigation capabilities. As to the regulatory basis for denying program approval, while the regulations do not specially prohibit facial hair in the seal area, sufficient regulatory guidance already exists which defines acceptable practices in this area. We wish to make the point that beards and facial hair are addressed specifically in this response only because they are the subject of your memorandum and the licensee's proposal. The basic issue is assurance that a leak-tight seal is obtained. Inadequate seals can be caused not only by beards and facial hair, but also facial bone structure, scar tissue, skin blemishes, etc. Personnel having any condition that prevents a leak-tight seal and proper operation of the respirator should not be qualified respirator wearers nor should they be assigned duties which necessitate the wearing of respirators.

And now to address your specific question of whether 10 CFR 20.103 (a) (3) permits the use of post-exposure whole body counts to determine compliance with Part 20 intake limits. As you know, the regulations allow licensees who choose not to fully implement the respiratory protection program requirements in 20.103 (c) (2) to use respirators, but does not allow them to take any credit for protection factors. We feel this is a reasonable position from the perspective of providing workers protection during routine, planned operations in airborne radioactivity areas. For these operations, the degree of hazard can be pre-determined by air sampling, and licensees can then assume no protection factors and limit the stay time such that administrative intake "overexposures" should not occur. However, the case for firefighters differs drastically.

Prompt emergency response does not lend itself to the pre-work assessment of airborne hazards (toxic smoke, gases, and radioactive material). In emergency situations, it is clearly illogical to take the "no-protection" assumption for entry into IDLH areas of unknown hazards. In the case of firefighting hazards, exposure to radioactive materials is generally of secondary importance, and toxic fumes/gases are the principal personal safety threat. However, a strict, legal reading of the regulations leads us to conclude that nothing specifically prohibits the licensee from using post-work whole body counts for demonstrating compliance with Part 20 intake limits for emergency entries into areas of unknown hazards. From a routine radiological perspective we are not uncomfortable with this reading; however, in the case of unqualified respirator wearers performing emergency response actions in high risk areas with the attendant unknown level of protection, we strongly believe the regulations should clearly require licensees to provide high quality respiratory protection.

We have worked closely with RES's Occupational Protection Branch on this matter and they have agreed to consider recommending interim changes to the regulations to clarify and strengthen the respiratory requirements in the emergency-use area. Additionally, they have budgeted research funds for the 1985 fiscal year to have Los Alamos examine the effect of facial hair on the operation of SCBA's. It is interesting to note that in the firefighter Quinn VS. Muscare case (copy enclosed) the Supreme Court did not overturn a lower court ruling in favor of the Chicago fire department's policy of not allowing facial hair in the seal area.

ELD has no legal objections to this guidance.

If you have any questions concerning this guidance, please call me or Jim Wigginton.

LeMoine J. Cunningham, Chief, Section B
Engineering and Generic
Communications Branch
Division of Emergency Preparedness
and Engineering Response, IE

Enclosures:
1. Licensee Proposal
2. LLL Article
3. Supreme Court Ruling

cc: see page 4

cc: R. Alexander, RES
W. Fisher, IE
E. Flack, IE
L. Cobb, IE
O. Lynch, IE
F. Congel, NRR
W. Cool, RES
A. Bellamy, RI
A. Gibson, RII
C. Paperiello, RIII
G. Brown, RIV
H. Book, RV
K. Cyr, ELD

Proposal Introduction

Corrective Action To Be Taken To Avoid Further Noncompliance:

The proposed policy regarding use of respiratory protection equipment (see response to Item No. 3a.2) will be implemented upon approval by the NRC, and all fire brigade members will be so qualified.

Our plant requirements will be changed to require biennial testing in accordance with Federal regulations.

The Date When Full Complilance Will be Achieved:

The date of full compliance is dependant on the results of the NRC review of the proposed policy but will be no later than 30 days following said approval. All required respiratory fit tests will be completed by March 1, 1983.

3a.2 "During this routine inspection, the inspectors observed a total of three (3) fire brigade members with full facial beards participation in the annual fire brigade practice session conducted on Wednesday, August 18, 1982. These persons cannot be considered qualified fire brigade members because their facial hair invalidates their qualification for the use of respiratory protection equipment".

Response to Item No. 3a.2

Corrective Action Taken and Results Achieved:

We have reviewed the applicable regulations regarding the use of respiratory protection devices, and there appears to be no specific requirement that would invalidate the respiratory protection qualification of fire brigade members wearing beards. In particular we noted the following:

10 CFR 20 - it is stated in Appendix A, footnote B, that "Only for shaven faces and where nothing interferes with the seal of tight fitting face pieces against the skin." This is interpreted to permit the use of published Protection Factors when the listed devices are used on individuals who are clean shaven in the area of the seal. However, 10 CFR 20 does not appear to state that individuals must be clean shaven to wear the respirator. Also, 10 CFR 20.103a.3 permits the use of post exposure whole body counts for the purpose of determining compliance with 10 CFR 20.103.

29 CFR - in this regulation which addresses non-radiological hazards it is stated in Section 1910.134e.5.i that, "Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beards, sideburns, a skull cap that projects under the face piece or temple pieces on glasses." Thus, if a good face seal exists

(defined as the lack of inward leakage) facial hair in the area of the seal may be worn.

Therefore, we are proposing the following policy regarding use of respiratory protection equipment. In addition to the regulations discussed above, this policy was developed based on the following two considerations:

1. The results of an experiment we performed with a Survive Air respirator which indicate that these 30 minute respirators, operating in the positive pressure mode, provide 22 minutes of protection for a person with a coarse full beard. This experiment was performed in a quantitative fit-test booth and the observed protection factor did not vary from those normally seen for clean shaven persons.

2. According to our Fire Plan, we may be required to call upon the local volunteer fire department for assistance. Some of these individuals, over whom we have no control, have beards.

The proposed policy is as follows:

a. Persons who may be required to wear respiratory protection devices with tight fitting face pieces shall be certified in their use. To maintain certification, each individual to be certified shall shave in the area of the seal and receive a quantitative fit test once every two years and/or if a significant change in the individual's facial features is noted.

b. Persons required to wear respiratory protection devices with tight fitting face pieces shall also be clean shaven in the area of the seal when such devices are required to be worn, except as described in c below.

c. Persons with facial hair in the area of the seal may initially don, (1) in emergency (radiological or fire) situations and, (2) in drills, positive pressure open circuit SCBAs provided that the service time is not reduced to less than 20 minutes. For persons with such facial hair, a length of service time test under simulated work conditions shall be performed with their beards intact at least every two years.

d. Individuals initially responding to emergencies, who have facial hair in the area of the seal, shall be replaced as soon as practical with individuals that are clean shaven in the area of the seal.

e. Determination of individual intakes of radioactivity may be based on air sample and bioassay techniques.

f. Appropriate respirator eyeglasses should be maintained available. Also, contact lenses shall not be worn in any Respiratory Protection Device.

Corrective Action To Be Taken To Avoid Further Noncompliance:

The proposed policy regarding use of respiratory protection equipment will be implemented upon approval by the NRC.

The Date When Full Compliance Will Be Achieved:

The date of full compliance is dependant on the results of the NRC review of the proposed policy but will be no later than 30 days following said approval.

3a.3 "Appendix A, cards 5 and 6, "Fire Emergency Actions and Responsibilities," of the fire protection implementing procedures do not require the fire brigade leader or other fire brigade members to respond to practice drill or actual fire scenes wearing protective turnout coats or OSHA hard hats."

Response to Item No. 3a.3

Corrective Action Taken and Results Achieved:

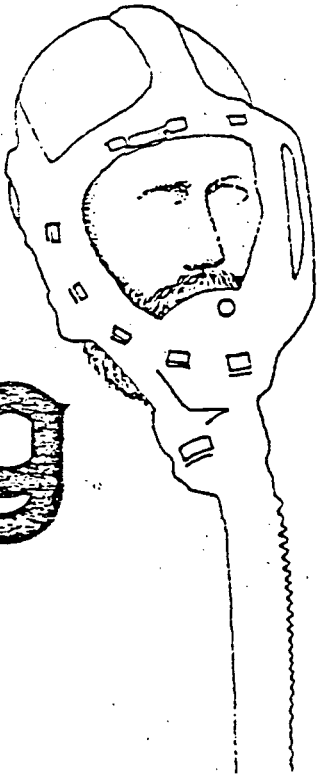
Section 5.6 of the Fire Protection Implementing Procedures states "Selfcontained breathing units shall be worn for protection against airborne activity, oxygen deficient areas, toxic gases or when specified by the Property Protection Supervisor or brigade leader." Appendix A, Card 5 (Fire Brigade Leader) states "His immediate actions are to don a self-contained breathing apparatus and bring the caddy to the scene of the fire."

We concur that protective clothing and respiratory equipment are important and should be worn when fighting fires. However, the NRC's concern is that all brigade members responding to a fire alarm should be required to first put on protective clothing and respiratory equipment.

We believe that response to a fire alarm should be immediate without undue delay. The detectors in use at Big Rock Point are very sensitive and if there is a fire, it could still be small enough that a fire extinguisher could put it out. If time is taken to go to a fire depot to don protective clothing and respirator, fire brigade members might arrive five or ten minutes later to the fire and the fire more involved.

Presently, the brigade leader dons protective clothing and a respirator and reports to the scene. Normally, an Auxiliary Operator would

Facial Hair & Breathing Protection



by Bruce J. Held

Because of its research in respiratory protective devices used by the fire service and industry, the Lawrence Livermore National Laboratory (LLNL) receives numerous requests for information about breathing protection. By far, the greatest number of letters and phone calls from the fire service concern the use of breathing apparatus by fire fighters with beards, long sideburns or extra-long moustaches. Periodically, there are grievances filed and hearings held for reprimands and dismissals issued by both industry and the fire service because a user of a respiratory protective device refused to shave excess facial hair, claiming a violation of personal rights. These are complicated occasionally by a condition, found usually in black males, in which shaving causes mild to severe irritation to the skin.

Since the problem of facial hair and breathing apparatus is of such widespread interest and concern, this article will discuss the situation and try to put it into perspective. While this article may not provide the answers to specific problems, which may involve emotional factors, it will give some specific information known about facial hair and breathing protection.

Facepiece-to-Face Leakage Rates

One of the more frequently asked questions is how much leakage does a beard cause? This question cannot be answered because the amount of leakage will vary considerably among individuals, depending on many factors.

The texture of a beard, for example, will affect the leak rate. A fine-haired beard usually will compact and cause less leakage than a coarse-haired beard. Hair is roughly in the shape of a cylinder. Thus, the smaller the diameter of each hair cylinder, the smaller the spaces between the hair cylinders. Figure 1 shows, in an exaggerated form, the difference in the size of the air spaces between a coarse beard with large-diameter hair cylinders and a fine beard with small-diameter hair cylinders.

The length of the hair is another factor affecting the leak rate. Figure 2 shows, in a simplified version, how the longer hairs may compress more tightly than shorter hairs. This compression can tend to push the facepiece further away from the face. Also, if the hairs are springy and kinky, they will resist packing together and tend to push the facepiece away, again increasing the leakage rate. Thus, a newly trimmed beard may be more springy and cause greater leakage than a longer one. Figure 2 also illustrates how even a one-day's growth of beard stubble can cause some leakage. Each day's growth will change the fitting characteristics, so someone who may have had a satisfactory fit one day will not have the same fit on succeeding days.

The volume of hair on the face is another determining factor in the fit. A person with thin sideburns pene-

This work was performed by Lawrence Livermore National Laboratory under the auspices of the U.S. Department of Energy, contract number W-7405-ENG-48.

trating the facepiece-to-face seal would not be expected to have as much leakage as someone with a full beard. The question then is how do you determine how much hair penetrating the facepiece-to-face seal is acceptable and how much is not? For this reason, most rules and regulations prohibit any facial hair in the facepiece sealing area.

While this article has been discussing how well a beard will "pack" down, it must be remembered that packing is also a function of how tightly the facepiece straps are pulled. If the straps are pulled as tightly as possible to "pack" the beard to its maximum, the wearer may not be able to stand the discomfort caused by pressure points for more than a few minutes. Facepieces are designed to fit best when tightened snugly against the face, not tightened to the point of distortion of the facepiece and discomfort to the wearer. Thus, if a bearded wearer tries to minimize leakage by overtightening the straps to "pack" his beard, he may be distorting the facepiece at other parts of his face and causing a leak there. In addition, because of discomfort, he may have difficulty working very long without loosening the straps.

Bearded personnel have claimed that the beard acts as a filter, keeping out smoke. This is true when the smoke particles involved are larger than the spaces between the hairs. As late as 1910, beards at least six inches long were required for fire fighters in many cities. The beard was dipped in a bucket of water before entering a burning building, folded into the mouth and used as a smoke filter for breathing.[1]

What must be remembered, though, is that a filter which allows air to pass through it also allows gases, vapors and small particles to pass through. And it is the highly toxic gas and vapor decomposition products from synthetic materials now found in homes and industry, and the usually present carbon monoxide, that are the major hazards to the fire fighter, not the large-size smoke particles or ashes.[2] Therefore, the filtering action of the beard is not protecting the fire fighter from the real dangers present in fire situations.

Another problem is that facial hair, if too long, can interfere with the operation of the facepiece exhalation valve. There have been examples where a goatee, full bushy beard or long handlebar moustache have penetrated the exhaust valve, holding it in the open position during inhalation and allowing contaminated outside air to come into the facepiece.

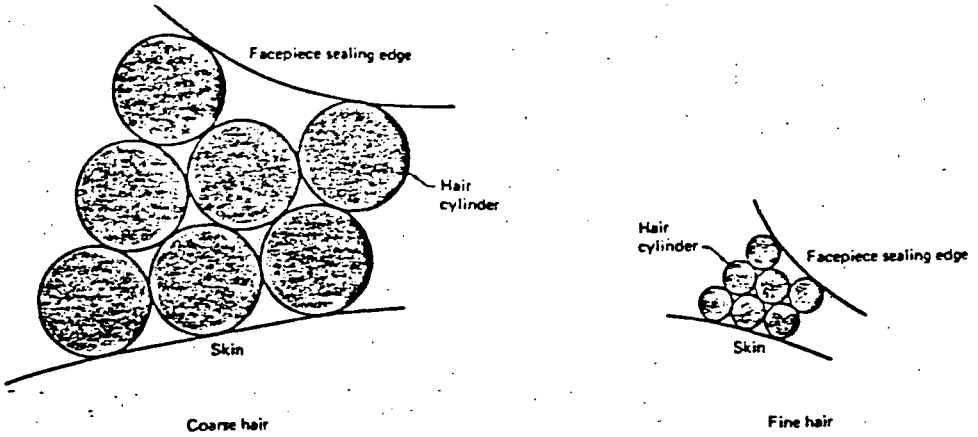


Figure 1. Effect of Compacting Coarse Hair or Fine Hair (Note the size of the air spaces between hair cylinders.)

How Much Facepiece Leakage Can Occur?

Periodically a bearded employee asks LLNL to measure his facepiece leakage to see if he can get a "satisfactory" seal. LLNL refuses to do this because the regulations under which the Laboratory operates prohibit any employee with facial hair, which penetrates the facepiece-to-face seal, from wearing any type of respiratory protective device. Moreover, even if a "satisfactory" fit were found today, tomorrow or in a few days it would no longer be adequate.

Studies have been published which do investigate the leakages found from facial hair.[3,4,5,6,7] One of the most complete studies was done by E. C. Hyatt, et al., at the Los Alamos National Scientific Laboratory.[8] This report, published in the April 1973 issue of the *American Industrial Hygiene Association Journal*, classified the various types of facial hair, gave the leakages they can cause and listed the effects of day-to-day beard growth on certain subjects. All tests were conducted on respiratory protective devices which had negative pressure in the facepiece on inhalation (equivalent to demand-type SCBA). Of 35 tests on bearded subjects with full facepieces, 27 had "unsatisfactory" fits, with leakages found up to 16%. (Note: these tests were conducted using salt particles as the test agent; higher leakages would be expected from a gas or vapor.)

The author is unaware of any studies published since the 1973 Los Alamos report. However, OSHA regulations prohibit industry from allowing any employees, with facial hair protruding into the facepiece-to-face seal, to use respirators. These regulations, which are based on the cited studies, have made additional investigations of little necessity. However, fire departments that do not come under state or federal regulations covering respiratory protection must make and enforce their own rules.

Positive Pressure (Pressure Demand) SCBA and Facial Hair

The studies cited above referred, of course, to negative pressure (demand) type breathing apparatus. An obvious answer to this is the use of positive pressure (pressure demand) respirators. Many departments are equipped with these devices already. Unfortunately, this is not a satisfactory answer. There are three problems which can occur with pressure demand apparatus and users with excessive facial hair. The first is that the leakage caused by the beard permits air within the facepiece to leak out, reducing the length of time the compressed air cylinder can supply air to the wearer. With a substantial leak caused by a beard, we have observed that a 30-minute unit, which normally will last 20-22 minutes at a moderate work rate, runs out of air in as short a time as 10-12 minutes.

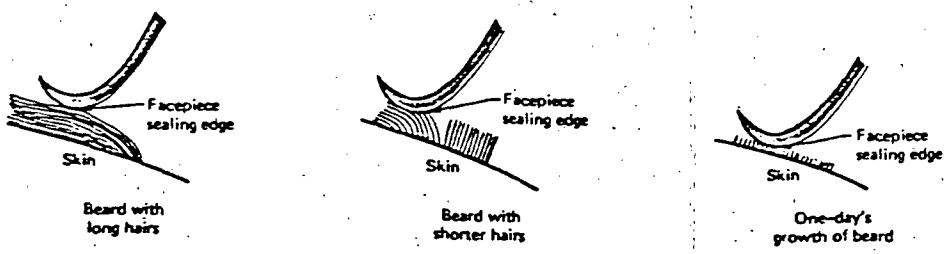


Figure 2. Effect of Beard Length

The second problem is that a person doing moderately heavy to heavy work can "overbreathe" the air supply if there is a leak, and suck or pull in outside contaminated air through the leak. In other words, the regulator cannot deliver enough air from the cylinder if the user takes a hard, rapid breath while doing hard work. This is more pronounced if the user is a large man with a large lung capacity. With a leak between the facepiece and the face, such as that caused by a beard, the extra air needed is drawn from outside the facepiece. (Note: if there is no leak, the facepiece will tend to collapse towards the wearer's face because of the vacuum created. This forces the user to slow down his breathing rate to a level which the regulator can deliver.)

The third problem is the one described earlier, where the beard can interfere with the exhaust valve operation. This, in turn, can allow outside contaminated air to enter the exhaust valve when the user takes a deep breath, because the valve is held open by the beard. It also allows air in the facepiece to escape during inhalation, again shortening the time the air supply will last.

Standards and Regulations

Practically every standard or regulation on respiratory protective devices prohibits the use of respirators if the wearer has any facial hair protruding between the face and the facepiece seal. This is true whether or not they have negative or positive pressure in the facepiece on inhalation. The only exceptions are devices with a hood or helmet which totally covers the head and seal at the neck, not the face. However, these are not available for self-contained breathing apparatus except for some five-minute escape devices.

The list of standards and regulations given here are national, not state or local. OSHA agreement-states would have their own regulations for respiratory protective devices and these regulations should be reviewed where applicable. Since the OSHA agreement-states' regulations must be equal to or better than federal OSHA requirements, rules prohibiting facial hair and respirator use should be included in all such state plans.

Standards

ANSI Z88.2 - 1980[9]

Facial hair is mentioned in this national standard, "Practices for Respiratory Protection," just published in 1980.

3.5.8 "A respirator with a facepiece shall not be worn if facial hair comes between the sealing periphery of the facepiece and the face or if facial hair interferes with valve function."

7.3.1 "A person who has hair (stubble, moustache, sideburns, beard, low hairline, bangs) which passes between the face and the sealing surface of the facepiece of the respirator shall not be permitted to wear such type of respirator."

7.3.2 "A person who has hair (moustache, beard) which interferes with the function of the respirator valve(s) shall not be permitted to wear the respirator."

ANSI Z88.5 - 1980[10]

This standard on "Practices for Respiratory Protection for the Fire Service," soon to be published, says:

9.7 "Facepiece-to-Face Sealing Problems. Facial hair which interferes with the facepiece-to-face seal or in the operation of the exhalation valve on the full facepiece of the SCBA shall not be permitted. Such facial hair may include beards, sideburns, moustaches, long hairlines, or bangs which pass between the sealing surface of the facepiece of the SCBA and the face of the wearer."

NIOSH—A Guide to Industrial Respiratory Protection[11]

"Facial hair lying between the sealing surface of a respirator facepiece and the wearer's skin will prevent a good seal. If the respirator permits negative air pressure inside the facepiece during inhalation, there will be excessive penetration by an air contaminant. Even a few days growth of stubble will permit excessive contaminant penetration.

"Respirators shall not be worn when conditions prevent a good seal of the facepiece to the face. Such items as beards and sideburns prevent satisfactory sealing. Therefore, anyone who has stubble, a moustache, sideburns, or a beard that passes between his face and the sealing surface shall not wear a respirator that allows negative pressure inside the facepiece during inhalation."

Federal OSHA—Section 1910.134[12]

This regulation, under which private industry falls, says:

"Every respirator wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that extends under the facepiece, or temple pieces on glasses."

Other Regulations

Both the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) have respirator regulations for their contractors and licensees, respectively, which prohibit facial hair and respirator use. The DOE manual is quoted as follows[13] and the NRC manual[14] has similar wording:

13.3 "Persons using tight-fitting (facepiece) respirators shall not have any facial hair which interferes with the sealing surface of the respirator. Any intrusion of facial hair into the sealing surface of the respirator results in an increase in leakage. Problem areas, other than full facial hair, are beards and moustaches with half-mask facepieces and long, wide sideburns on full facepieces.

"Individuals who have facial hair styles which might interfere with the sealing surface of a respirator must be closely supervised. Over a short period of time (even days), the facial hair could extend into the critical seal area. Any worker who has facial hair which intrudes into the area where the respirator seals against the face shall not be fitted with a respirator. Additionally, any worker who is not clean-shaven shall not be allowed to wear a respirator, even though he has previously obtained a satisfactory fit with the particular device. This does not apply to loose-fitting enclosures such as hoods, blouses, or suits."

Summary

This article has presented the reasons why breathing apparatus should not be used by persons with facial hair which protrudes between the facepiece sealing area and the face. Unfortunately, what should be a common sense health protective measure has, in some cases, become an emotional issue with both personal and civil rights thought to be jeopardized.

Many of these confrontations should be resolved by common sense. For example, knowing that a very short stubble usually causes less leakage than full bushy beards, a person with the skin condition caused by shaving probably could be fairly well protected by trimming the whiskers as close to the skin as possible with scissors and using pressure demand SCBA.

In like manner, someone who feels strongly about keeping a beard (for example, to hide a scar or other disfigurement) could shave where the facepiece seals to the skin and keep the beard short enough so it does not interfere with the exhalation valve.

It is difficult to decide whether a little hair would be permissible under the facepiece sealing surface when pressure demand apparatus is used. For example, should thin sideburns, which probably would be perfectly safe, be permitted? Since limits are hard to define, standards and regulations say none is permitted. However, some facial hair with pressure demand SCBA might be acceptable if it does not deplete the air supply appreciably, interfere with the exhaust valve function or allow overbreathing by a large lung capacity person.

Knowing these limitations, individual fire departments, if not forced to do so by regulations, might feel that they can permit some reasonable amounts of facial hair. Their problem will be how to define and enforce "reasonable." The health and life of the user is involved, so these decisions must be made carefully. It must be emphasized again that facial hair characteristics change daily, so any tests of facepiece fit or how long the breathing air cylinder will last on one day will be different on succeeding days.

Finally, under no conditions, would this author recommend that any facial hair which intrudes between the facepiece-to-face seal be permitted in those departments using demand apparatus.

References

[1]Held, B. J., "What's Old-in-Fire Fighter Breathing Apparatus?", Part II, *The International Fire Chief*, Vol. 44, No. 2, Washington, D.C., (February 1978).

[2]Davis, T. O. and Held, B. J., "The Case for Pressure-Demand Self-Contained Breathing Apparatus, *The International Fire Chief*, Vol. 44, No. 10, Washington, D.C., (October 1978).

[3]Hounam, R. F., et al., "The Evaluation of Protection Provided by Respirators," *Annals of Occup. Hyg.*, 7: 353-363, Pergamon Press, 1964.

[4]Griffin, O. G., and Longson, D. J., "Influence of Facemask Design on Operational Performance," *Fire Command*, September, 18-23 (1971).

[5]Goldberg, M. N., et al., "Individual Respiratory Protection Against Chemical and Biological Agents," *Eighth Quarterly Progress Report*, July:46 Physical Protection Laboratory, Defense Development and Engineering Laboratories, Edgewood Arsenal, Maryland (1966).

[6]*Bioenvironmental Safety Newsletter.* Life Sciences Department, Naval Safety Center, 2nd Quarter (1971).

[7]Persson, G., "Alarming Figures," *Brandforsvar* (Fire Defense), Sweden, (May 1971).

[8]Hyatt, E. C., et al., "Effect of Facial Hair on Respirator Performance," *American Industrial Hygiene Association Journal*, Vol. 34, No. 4, Akron, Ohio, (April 1973).

[9]*American National Standard, Practices for Respiratory Protection*, ANSI Z88.2, New York, New York (1980).

[10]*American National Standard, Practices for Respiratory Protection for the Fire Service*, ANSI Z88.5, Final Draft, New York, New York (1980).

[11]Pritchard, J. A., "A Guide to Industrial Respiratory Protection," National Institute for Occupational Safety and Health, Cincinnati, Ohio (1976).

[12]Occupational Safety and Health Administration, "Occupational Safety and Health Standards, Title 29—Labor, Subpart I., Personal Protective Equipment Section 1910.134,(e),(5),(i), *Federal Register*, Vol. 37, No. 202, Part II, Washington, D.C. (Oct. 18, 1972).

[13]Department of Energy (formerly Energy Research and Development Administration), "Compliance Respirator Program," Manual Section 13.3, Washington, D.C. (1975).

[14]Caplin, J. L., Held, B. J., and Catlin, R. J., "Manuals of Respiratory Protection Against Airborne Radioactive Materials," NUREG-0041, U.S. Nuclear Regulatory Commission, Washington, D.C. (1976).

Bruce J. Held *is the group leader of the Industrial Hygiene Support Group at Lawrence Livermore National Laboratory in Livermore, California. In 1972-73, he was the leader of the Respirator Section of the Industrial Hygiene Group at Los Alamos Scientific Laboratory in New Mexico. He holds a B.S. in biology from Cornell University and an M.P.H. in industrial health from the University of Michigan. He was the chairman of the American National Standards Institute Z88.5 Committee on Practices for Respiratory Protection for the Fire Service. Mr. Held is a frequent contributor to this magazine, including a definitive eight-part series on self-contained breathing apparatus in 1978-79.*

Effect of Facial Hair on Respirator Performance

E. C. HYATT, J. A. PRITCHARD, C. P. RICHARDS, and L. A. GEOFFRION

Los Alamos Scientific Laboratory, University of California, Los Alamos, New Mexico 87544

The effect of facial hair on the performance of half-mask and full-facepiece respirators was measured with quantitative aerosol respirator-man-test systems. Different test subjects having varying degrees of facial stubble, sideburns, and beards were used in the study. Test results showed that the effect of facial hair on the performance of a respirator depends upon the degree to which the hair interferes with the sealing surface of the respirator, the physical characteristics of the facial hair, the type respirator worn in relation to the subject's facial characteristics, and other factors. It is concluded that persons with excessive facial hair such as facial stubble, sideburns, and beards which interfere with the respirator seal, cannot expect to obtain as high a degree of respirator performance as persons who are clean shaven.

Introduction

IT IS OBVIOUS TO EVEN the most casual observer that there has been a pronounced change toward longer male hair styles and toward the wearing of moustaches; wide, long sideburns; and beards. Although this paper is concerned only with the effect of facial hair on respirator performance, the problem of the beard as an occupational hazard is not new. For example, Alexander The Great prohibited his Grecian soldiers from wearing beards because they were too convenient a hand-hold in battle.

The present day consequences of wearing beards are not likely to be as severe as in Alexander's time, but nevertheless a man wearing a respirator can unknowlingly be placed in a hazardous situation if his facial hair interferes with the sealing of the respirator on his face.

In recent years others have investigated the problem of the effect of facial hair on respirator performance. Among them are Hounam[1] and Griffin[2] in the United Kingdom; the U.S. Army[3] and Navy;[4] various fire departments, including the Swedish Fire Defense Agency;[5] and the Atomic Energy Commission. The Los Alamos Scientific Laboratory became involved as part of a much larger project to evaluate all types of respiratory protective devices under simulated work conditions. We have also been investigating other factors that effect respirator performance, such as this very contemporary problem of beards. Our study was limited to the testing of several different types of half-mask and full-facepiece respirators equipped with high-efficiency cartridges.

Work performed under the auspices of the U.S. Atomic Energy Commission.

Experimental Procedure

Quantitative Man-Test Systems

Two types of quantitative man-test systems were used in this study. The quantitative dioctyl phthlate (DOP) aerosol respirator man-test system consisted of a thermal DOP generator that produced a monodisperse 0.3-μm DOP aerosol in a 3 ft by 3 ft by 7 ft high man-test chamber. The amount of facepiece leakage was determined with a forward-light-scattering photometer by sampling continuously from the facepiece at 8 liters per minute (LPM).

The prototype NaCl aerosol respirator man-test system used a Wright Nebulizer to supply a 0.7-μm aerodynamic mass median diameter (AMMD) polydisperse NaCl aerosol to a portable test hood. A continuous sample was taken from the facepiece at 1

INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

1750 NEW YORK AVENUE, N.W., WASHINGTON, D.C. 20006
TELEPHONE NO. (202) 872-8484

William H. McClennan
President

Frank A. Palumbo
Secretary-Treasurer

Dear Sir and Brothers:

Due to changes in grooming and styles of the fire fighters, many of our local unions and individual members are at odds with old rules and regulations, new additions, and amendments with stricter enforcement.

We have been of the opinion that a court or Arbitration Board could rule in any direction. However, when the fire department administration stressed safety and mask leakage due to excessive hair, reasonable rules and regulations were upheld.

The latitude of fire fighters in the United States was restricted by a legal decision on April 5, 1976 in which the U.S. Supreme Court upheld the employer's right to set "rational" hair regulations. In Kelley, Commissioner, Suffolk County, N.Y. Police Department v. Johnson the majority of the court ruled that a county regulation limiting the length of a policeman's hair did not violate any rights guaranteed by the 14th Amendment. The Court said the regulation could be supported because it reflects the desire to make police officers recognizable to the public and similar application to all would result in improving the "esprit de corps." Safety of the employee was not a factor in this case.

A second case involving a fire fighter Quinn v. Muscare, Supreme Court #75-130, supports the Kelley v. Johnson theory and is included with the enclosed supplemental information. Edward Hickey, Jr., General Counsel for the IAFF, has furnished an analysis of each case.

Fraternally,

Michael J. Smith

Michael J. Smith
Director of Research

Enclosures

ANALYSIS OF DECISION

of the

SUPREME COURT OF THE UNITED STATES

in

KELLEY V. JOHNSON

On April 5 the Supreme Court of the United States handed down its opinion in Kelley v. Johnson reversing a decision of the United States Court of Appeals for the Second Circuit and upholding a county regulation limiting the length of county policemen's hair.

In this case the Police Commissioner of Suffolk County, New York, had promulgated a regulation directed at the style and length of hair, sideburns, and mustaches worn by male police officers and which prohibited beards and goatees except those worn for medical reasons. The regulation was attacked as violative of a patrolman's right of free expression under the First Amendment and his guarantees of due process and equal protection under the Fourteenth Amendment because, since it was not based upon the generally accepted standard of grooming in the community, it placed undue restriction upon his activities in the community.

A majority of the Supreme Court, in an opinion by Justice Rehnquist, declined to recognize that the Constitution protects ordinary citizens in matters of personal appearance but stated that, even if such protection is afforded ordinary citizens, government employees are to be treated differently from the citizenry at large. Thus, the Court found it "highly significant" that the individual attacking the Suffolk County regulation was proceeding "not as a member of the citizenry at large, but on the contrary as an employee of the police force of Suffolk County, a subdivision of the State of New York." Moreover, the Court felt that

since this case does not involve a fundamental First Amendment right, and since the Court has recently sustained comprehensive and substantial restrictions upon government employees' First Amendment activities, there was "surely even more room for restrictive regulations of state employees [here] where the claim implicate[d] only the more general contours of the substantive liberty interest protected by the Fourteenth Amendment."

Since the majority felt no fundamental right was involved, it determined that the hair length regulation should be considered not as a separate infringement upon an alleged liberty interest but rather in the overall context of the county's chosen mode of organization for its police force. In this light the majority rejected the lower court's view that the burden was on the State to establish a genuine public need for each of these regulations. Rather, the majority felt that all such regulations, which had no counterpart with respect to the public at large, were part and parcel of the county's chosen organizational structure, "which [the county] undoubtedly deem[ed] the most efficient in enabling its police to carry out [their] duties". As such the Court found the regulations to be a presumptively valid action pursuant to the State's police power. The significance of this opinion is that the burden is no longer upon the State to establish a genuine public need for these types of regulations (i.e., those not affecting First Amendment rights) but rather upon the individual State employees to show that the

regulations are not rationally connected to the promotion of safety of persons and property.

Applying this test to the specific facts of the case, the majority upheld the Suffolk County hair regulation. Inferring from the fact that the overwhelming majority of state and county police are uniformed that similarity of police officers is desirable, the majority determined that whether such a choice was based "on a desire to make police officers readily recognizable to the members of the public, or a desire for the esprit de corps which such similarity is felt to inculcate within the police force itself", either basis constituted a sufficiently rational justification for the regulation so as to defeat the individual patrolman's claim.

Justice Powell, concurring with the majority, felt that the majority opinion did not imply that a liberty interest as to matters of personal appearance did not fall within the Fourteenth Amendment. Rather, he analyzed the case on the basis of a weighing of the degree of infringement of the individual's liberty interest against the need for the regulation and determined that this process of analysis justified the application of a reasonable regulation to uniform police forces that would be an impermissible intrusion upon liberty in a different context.

Justices Marshall and Brennan dissenting, stated that the majority's opinion "that the liberty guarantee of the Fourteenth Amendment does not encompass matters of personal appearance [is] fundamentally inconsistent

with the values of privacy, self-identity, autonomy, and personal integrity, that [the dissenters] have always assumed the Constitution was designed to protect." The lack of precedent on this specific issue of a citizen's right to choose his own appearance, the dissenters continue, arises "only because the right has been so clear as to be beyond question . . . its existence has simply been taken for granted. In an increasingly crowded society in which it is already extremely difficult to maintain one's identity and personal integrity, it would be distressing, to say the least, if the Government could regulate our personal appearance unconfined by any constitutional strictures whatsoever." In addition, the dissenters, while fully accepting the goals of identifiability of police officers and maintenance of esprit de corps, could find no rational relationship between the challenged hair regulations and these goals.

Edward J. Hickey, Jr.
General Counsel, IAFF

FILE

(Slip Opinion)

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States* v. *Detroit Lumber Co.*, 200 U.S. 321, 337.

SUPREME COURT OF THE UNITED STATES

Syllabus

KELLEY, COMMISSIONER, SUFFOLK COUNTY POLICE DEPARTMENT *v.* JOHNSON

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

No. 74-1269. Argued December 8, 1975—Decided April 5, 1976

A county regulation limiting the length of county policemen's hair *held* not to violate any right guaranteed respondent policeman by the Fourteenth Amendment. Pp. 6–11.

(a) Respondent sought the protection of the Fourteenth Amendment, not as an ordinary citizen, but as a law enforcement employee of the county, a subdivision of the State, and this distinction is one of considerable significance since a State has wider latitude and notably different interests in imposing restrictive regulations on its employees than it does in regulating the citizenry at large. P. 7.

(b) Choice of organization, dress, and equipment for law enforcement personnel is entitled to the same sort of presumption of legislative validity as are state choices to promote other aims within the cognizance of the State's police power. Thus, the question is not whether the State can "establish" a "genuine public need" for the specific regulation, but whether respondent can demonstrate that there is no rational connection between the regulation, based as it is on the county's method of organizing its police force, and the promotion of safety of persons and property. Pp. 7–10.

(c) Whether a state or local government's choice to have its police uniformed reflects a desire to make police officers readily recognizable to the public or to foster the *esprit de corps* that similarity of garb and appearance may inculcate within the police force itself, the justification for the hair-style regulation is sufficiently rational to defeat respondent's claim based on the liberty guarantee of the Fourteenth Amendment. P. 10.

508 F. 2d 836, reversed.

I

Syllabus

REHNQUIST, J., delivered the opinion of the Court, in which BURGER, C. J., and STEWART, WHITE, BLACKMUN, and POWELL, JJ., joined. POWELL, J., filed a concurring opinion. MARSHALL, J., filed a dissenting opinion, in which BRENNAN, J., joined. STEVENS, J., took no part in the consideration or decision of the case.

SUPREME COURT OF THE UNITED STATES

No. 74-1269

Eugene R. Kelley, Commissioner of the Suffolk County Police Department, Petitioner, v. Edward Johnson, etc.	On Writ of Certiorari to the United States Court of Appeals for the Second Circuit.

[April 5, 1976]

MR. JUSTICE REHNQUIST delivered the opinion of the Court.

The District Court for the Eastern District of New York originally dismissed respondent's complaint seeking declaratory and injunctive relief against a regulation promulgated by petitioner limiting the length of a policeman's hair. On respondent's appeal to the Court of Appeals for the Second Circuit, that judgment was reversed, and on remand the District Court took testimony and thereafter granted the relief sought by respondent. The Court of Appeals affirmed, and we granted certiorari, 421 U. S. 987 (1975), to consider the constitutional doctrine embodied in the rulings of the Court of Appeals. We reverse.

I

In 1971 respondent's predecessor, individually and as president of the Suffolk County Patrolmen's Benevolent Association, brought this action under the Civil Rights Act of 1871, 42 U. S. C. § 1983, against petitioner's predecessor, the Commissioner of the Suffolk County Police

Department. The Commissioner had promulgated Order No. 71–1, which established hair grooming standards applicable to male members of the police force.[1] The

[1] Order No. 71–1, amending Chapter 2 of the Rules and Procedures, Police Department, County of Suffolk, N. Y., provided:

"2/75.0 Members of the Force and Department shall be neat and clean at all times while on duty. Male personnel shall comply with the following grooming standards unless excluded by the Police Commissioner due to special assignment:

"2/75.1 HAIR: Hair shall be neat, clean, trimmed, and present a groomed appearance. Hair will not touch the ears or the collar except the closely cut hair on the back of the neck. Hair in front will be groomed so that it does not fall below the band of properly worn headgear. In no case will the bulk or length of the hair interfere with the proper wear of any authorized headgear. The acceptability of a member's hair style will be based upon the criteria in this paragraph and not upon the style in which he chooses to wear his hair.

"2/75.2 SIDEBURNS: If an individual chooses to wear sideburns, they will be neatly trimmed and tapered in the same manner as his haircut. Sideburns will not extend below the lowest part of the exterior ear opening, will be of even width (not flared), and will end with a clean-shaven horizontal line.

"2/75.3 MUSTACHES: A short and neatly trimmed mustache may be worn, but shall not extend over the top of the upper lip or beyond the corners of the mouth.

"2/75.4 BEARDS & GOATEES: The face will be clean-shaven other than the wear of the acceptable mustache or sideburns. Beards and goatees are prohibited, except that a Police Surgeon may grant a waiver for the wearing of a beard for medical reasons with the approval of the Police Commissioner. When a Surgeon prescribes that a member not shave, the beard will be kept trimmed symmetrically and all beard hairs will be kept trimmed so that they do not protrude more than one-half inch from the skin surface of the face.

"2/75.5 WIGS: Wigs or hair pieces will not be worn on duty in uniform except for cosmetic reasons to cover natural baldness or physical disfiguration. If under these conditions, a wig or hair piece is worn, it will conform to department standards."

regulation was directed at the style and length of hair, sideburns, and mustaches; beards and goatees were prohibited, except for medical reasons; and wigs conforming to the regulation could be worn for cosmetic reasons. The regulation was attacked as violative of respondent patrolman's right of free expression under the First Amendment and his guarantees of due process and equal protection under the Fourteenth Amendment, in that it was "not based upon the generally accepted standard of grooming in the community" and placed "an undue restriction" upon his activities therein.

The Court of Appeals held that cases characterizing the uniform civilian services as "para-military," and sustaining hair regulations on that basis, were not soundly grounded historically.[2] It said the fact that a police force is organized "with a centralized administration and a disciplined rank and file for efficient conduct of its affairs" did not foreclose respondent's claim, but instead bore only upon "the existence of a legitimate state interest to be reasonably advanced by the regulation." *Owen* v. *Barry*, 483 F. 2d 1126, 1128–1129 (1973). The Court of Appeals went on to decide that "choice of personal appearance is an ingredient of an individual's personal liberty"[3] and is protected by the Fourteenth Amend-

[2] *E. g., Stradley* v. *Anderson*, 478 F. 2d 188 (CA8 1973); *Greenwald* v. *Frank*, 40 A. D. 2d 717, 337 N. Y. S. 2d 225 (1972), aff'd without opinion, 32 N. Y. 2d 802, 346 N. Y. S. 2d 529, 299 N. E. 2d 895 (1973). The District Court's dismissal was based on cases upholding the discretionary power of the military and National Guard to regulate a soldier's hair length. See *Gianatasio* v. *Whyte*, 426 F. 2d 908 (CA2), cert. denied, 400 U. S. 941 (1970); *Raderman* v. *Kaine*, 411 F. 2d 1102 (CA2), cert. dismissed, 396 U. S. 976 (1969).

[3] *Id.*, at 1130. While it recognized the distinction between citizens and uniformed employees of police and fire departments, the Court of Appeals stated that the individual's status bore not on the

ment. It further held that the police department had "failed to make the slightest showing of the relationship between its regulation and the legitimate interest it sought to promote." *Id.*, at 1130–1131. On the basis of this reasoning it concluded that neither dismissal nor summary judgment in the District Court was appropriate, since the department "has the burden of establishing a genuine public need for the regulation." *Id.*, at 1131.

Thereafter the District Court, under the compulsion of the remand from the Court of Appeals, took testimony on the question of whether or not there was a "genuine public need." The sole witness was the Deputy Commissioner of the Suffolk County Police Department, petitioner's subordinate, who testified as to the police department's concern for the safety of the patrolmen, and the need for some standards of uniformity in appearance.[4]

existence of his right but whether the right was outweighed by a legitimate state interest. *Id.*, n. 9.

[4] On remand, the complaint was appropriately amended to reflect the interim renumbering and modification of the hair grooming regulation. The former sections 2/75.0–2/75.3, see n. 1, *supra*, were modified to provide as follows:

"Members of the Force will be neat and clean at all times while on duty. Male personnel will comply with the following grooming standards unless excluded by the Police Commissioner due to special assignments:

"A. Hair will be neat, clean, trimmed and present a groomed appearance. Hair will not go below the ears or the collar except the closely cut hair on the back of the neck. Pony tails are prohibited. In no case will the bulk or length of the hair interfere with the proper wear of any authorized headgear.

"B. If a member chooses to wear sideburns, they will be neatly trimmed. Sideburns will not extend below the lowest part of the ear. Sideburns shall not be flared beyond 2" in width and will end with a clean-shaven horizontal line. Sideburns shall not connect with the mustache.

"C. A neatly trimmed mustache may be worn."

Rules and Procedures, Police Department, County of Suffolk, N. Y., 2/2.16 (hereinafter Rules and Procedures). Sections 2/75.4–2/75.5, see n. 1, *supra*, were simply renumbered as 2/2.16, subdivisions D and E, respectively. Deputy Commissioner Rapp's testimony on remand was directed to the regulation as modified. For present purposes, the differences are immaterial.

[5] Illustrating one safety problem, Rapp showed that an assailant could throw an officer off-balance by grabbing his hair from the rear and levering against the patrolman's back. After noting that the prohibition against "pony tails" was thus a proper one, the District Court stated:

"The remainder of 2/2.16A, however, bears no relationship to safety but rather related to hair styling. The potential danger in hairdress is the ability of the offender to grip the hair and hold the fate of the police officer in his hand. Bulk and length of the hair is not regulated except as it interferes with 'the proper wear of any authorized headgear.' Thus the regulation would permit bulky and lengthy hair on the top of the head, thereby presenting the very problem that was demonstrated. In the remaining subdivisions, sideburns, mustaches and wigs are regulated and beards are barred. No proof was offered to support any claim of the need for the protection of the police officer in the pertinent regulations."

The District Court's findings with respect to the relationship between morale and grooming standards are as follows:

"The high morale of police personnel is a matter of grave concern to the department. Proper grooming is an ingredient of the esprit de corps of a good law enforcement organization. The self-esteem generated in the individual and the respect commanded from the public it serves promotes [*sic*] the efficiency of the organization's work. However, with the exception of the general requirement that hair, sideburns and mustaches be neatly trimmed, the regulations do not provide standards for proper grooming. Rather, the standards do nothing more than demand uniformity. Uniformity for uniformity's sake does not establish a public need. Defendant offered no

The District Court held that "no proof" was offered to support any claim of the need for the protection of the police officer, and that while "proper grooming" is an ingredient of a good police department's "esprit de corps," petitioner's standards did not establish a public need because they ultimately reduced to "[u]niformity for uniformity's sake."[5] The District Court granted the

relief prayed for by respondent, and on petitioner's appeal that judgment was affirmed without opinion by the Court of Appeals.

II

Section 1 of the Fourteenth Amendment to the United States Constitution provides in pertinent part:

> "[No State] shall . . . deprive any person of life, liberty, or property, without due process of law."

This section affords not only a procedural guarantee against the deprivation of "liberty," but likewise protects substantive aspects of liberty against unconstitutional restriction by the State. *Board of Regents* v. *Roth*, 408 U. S. 564, 572 (1972); *Griswold* v. *Connecticut*, 381 U. S. 479, 502 (1965) (WHITE, J., concurring).

The "liberty" interest claimed by respondent here, of course, is distinguishable from those protected by the Court in *Roe* v. *Wade*, 410 U. S. 113 (1973); *Eisenstadt* v. *Baird*, 405 U. S. 438 (1972); *Stanley* v. *Illinois*, 405 U. S. 645 (1972); *Griswold* v. *Connecticut*, *supra*; and *Meyer* v. *Nebraska*, 262 U. S. 390 (1923). Each of those cases involved a substantial claim of infringement on the individual's freedom of choice with respect to certain basic matters of procreation, marriage, and family life. But whether the citizenry at large has some sort of "liberty" interest within the Fourteenth Amendment in matters of

---

proof that beards, goatees, hair styles that extend below the ears or collar, or sideburns that extend below the lowest part of the ear or beyond 2" in width and do not end with a clean-shaven horizontal line affect the morale of the members of the police department or earn the disrespect of the public."

While noting Rapp's testimony that uniformity was required for identification, the District Court stated: "It would appear, however, that the uniform (issued by the department) supplies the necessary identification for police work."

personal appearance is a question on which this Court's cases offer little, if any, guidance. We can, nevertheless, assume an affirmative answer for purposes of deciding this case, because we find that assumption insufficient to carry the day for respondent's claim.

Respondent has sought the protection of the Fourteenth Amendment not as a member of the citizenry at large, but on the contrary as an employee of the police force of Suffolk County, a subdivision of the State of New York. While the Court of Appeals made passing reference to this distinction, it was thereafter apparently ignored. We think, however, it is highly significant. In *Pickering* v. *Board of Education*, 391 U. S. 563, 568 (1968), after noting that state employment may not be conditioned on the relinquishment of First Amendment rights, the Court stated that "[a]t the same time it cannot be gainsaid that the State has interests as an employer in regulating the speech of its employees that differ significantly from those it possesses in connection with regulation of the speech of the citizenry in general." More recently, we have sustained comprehensive and substantial restrictions upon activities of both federal and state employees lying at the core of the First Amendment. *Civil Service Comm'n* v. *Letter Carriers*, 413 U. S. 548 (1973); *Broadrick* v. *Oklahoma*, 413 U. S. 601 (1973). If such state regulations may survive challenges based on the explicit language of the First Amendment, there is surely even more room for restrictive regulations of state employees where the claim implicates only the more general contours of the substantive liberty interest protected by the Fourteenth Amendment.

The hair length regulation here touches respondent as an employee of the county and, more particularly, as a policeman. Respondent's employer has, in accordance

with its well-established duty to keep the peace, placed myriad demands upon the members of the police force, duties which have no counterpart with respect to the public at large. Respondent must wear a standard uniform, specific in each detail.[6] When in uniform he must salute the flag.[7] He cannot take an active role in local political affairs by way of being a party delegate or contributing or soliciting political contributions.[8] He cannot smoke in public.[9] All of these and other regulations [10] of the Suffolk County Police Department infringe on respondent's freedom of choice in personal matters, and it was apparently the view of the Court of Appeals that the burden is on the State to prove a "genuine public need" for each and every one of these regulations.

This view was based upon the Court of Appeals' reasoning that the "unique judicial deference" accorded by the judiciary to regulation of members of the military was inapplicable because there was no historical or functional justification for the characterization of the police as "para-military." But the conclusion that such cases are inapposite, however correct, in no way detracts from the deference due Suffolk County's choice of an organizational structure for its police force. Here the County has chosen a mode of organization which it undoubtedly deems the most efficient in enabling its police to carry out the duties assigned to them under state and local law.[11]

[6] Rules and Procedures 4/1.0–4/1.3.
[7] *Id.*, 6/2.2.
[8] *Id.*, 2/2.5.
[9] *Id.*, 2/5.1.
[10] See, *e. g.*, *id.*, 2/14.0 *et seq.* (Code of Ethics).
[11] The Court of Appeals itself found that while there was no desire on the part of local governments like Suffolk County to create a "military force," "[t]he use of such organization evolved as a *practical administrative solution* . . . ." 483 F. 2d, at 1128–1129 (emphasis added).

Such a choice necessarily gives weight to the overall need *for discipline, esprit de corps, and uniformity.*

The county's choice of an organizational structure, therefore, does not depend for its constitutional validity on any doctrine of historical prescription. Nor, indeed, has respondent made any such claim. His argument does not challenge the constitutionality of the organizational structure, but merely asserts that the present hair length regulation infringes his asserted liberty interest under the Fourteenth Amendment. We believe, however, that the hair length regulation cannot be viewed in isolation, but must be rather considered in the context of the county's chosen mode of organization for its police force.

The promotion of safety of persons and property is unquestionably at the core of the State's police power, and virtually all state and local governments employ a uniformed police force to aid in the accomplishment of that purpose. Choice of organization, dress, and equipment for law enforcement personnel is a decision entitled to the same sort of presumption of legislative validity as are state choices designed to promote other aims within the cognizance of the State's police power. *Day-Brite Lighting, Inc.* v. *Missouri*, 342 U. S. 421, 423 (1952); *Prince* v. *Massachusetts*, 321 U. S. 158, 168–170 (1944); *Olsen* v. *Nebraska*, 313 U. S. 236, 246–247 (1941). Having recognized in other contexts the wide latitude accorded the Government in the "dispatch of its own internal affairs," *Cafeteria Workers* v. *McElroy*, 367 U. S. 886, 896 (1961), we think Suffolk County's police regulations involved here are entitled to similar weight. Thus the question is not, as the Court of Appeals conceived it to be, whether the State can "establish" a "genuine public need" for the specific regulation. It is whether respondent can demonstrate that there is no rational connection between the regulation, based as it is on respondent's method of orga-

nizing its police force, and the promotion of safety of persons and property. *United Public Workers* v. *Mitchell*, 330 U. S. 75, 100–101 (1947); *Jacobson* v. *Massachusetts*, 197 U. S. 11, 30–31, 35–37 (1905).

We think the answer here is so clear that the District Court was quite right in the first instance to have dismissed respondent's complaint. Neither this Court, the Court of Appeals, or the District Court is in a position to weigh the policy arguments in favor of and against a rule regulating hair styles as a part of regulations governing a uniformed civilian service. The constitutional issue to be decided by these courts is whether petitioner's determination that such regulations should be enacted is so irrational that it may be branded "arbitrary," and therefore a deprivation of respondent's "liberty" interest in freedom to choose his own hair style. *Williamson* v. *Lee Optical Co.*, 348 U. S. 483, 487–488 (1955). The overwhelming majority of state and local police of the present day are uniformed. This fact itself testifies to the recognition by those who direct those operations, and by the people of the States and localities who directly or indirectly choose such persons, that similarity in appearance of police officers is desirable. This choice may be based on a desire to make police officers readily recognizable to the members of the public, or a desire for the *esprit de corps* which such similarity is felt to inculcate within the police force itself. Either one is a sufficiently rational justification for regulations so as to defeat respondent's claim based on the liberty guaranty of the Fourteenth Amendment.

The Court of Appeals relied on *Garrity* v. *New Jersey*, 385 U. S. 493 (1967), and *amici* in their brief in support of respondent elaborate an argument based on the language in *Garrity* that "policemen, like teachers and lawyers, are not relegated to a watered-down version of

constitutional rights." *Id.*, at 500. *Garrity*, of course, involved the protections afforded by the Fifth Amendment to the United States Constitution as made applicable to the States by the Fourteenth Amendment. *Malloy* v. *Hogan*, 378 U. S. 1 (1964). Certainly its language cannot be taken to suggest that the claim of a member of a uniformed civilian service based on the "liberty" interest protected by the Fourteenth Amendment must necessarily be treated for constitutional purposes the same as a similar claim by a member of the general public.

The regulation challenged here did not violate any right guaranteed respondent by the Fourteenth Amendment to the United States Constitution, and the Court of Appeals was therefore wrong in reversing the District Court's original judgment dismissing the action. The judgment of the Court of Appeals is

Reversed.

MR. JUSTICE STEVENS took no part in the consideration or decision of this case.

SUPREME COURT OF THE UNITED STATES

No. 74–1269

Eugene R. Kelley, Commissioner of the Suffolk County Police Department, Petitioner, *v.* Edward Johnson, etc.	On Writ of Certiorari to the United States Court of Appeals for the Second Circuit.

[April 5, 1976]

MR. JUSTICE POWELL, concurring.

I concur in the opinion of the Court and write to make clear that, contrary to the concern expressed in the dissent, I find no negative implication in the opinion with respect to a liberty interest within the Fourteenth Amendment as to matters of personal appearance. See *Poe* v. *Ullman*, 367 U. S. 497, 541–543 (1961) (Harlan, J., dissenting). When the State has an interest in regulating one's personal appearance, as it certainly does in this case, there must be a weighing of the degree of infringement of the individual's liberty interest against the need for the regulation. This process of analysis justifies the application of a reasonable regulation to a uniformed police force that would be an impermissible intrusion upon liberty in a different context.

SUPREME COURT OF THE UNITED STATES

No. 74–1269

Eugene R. Kelley, Commissioner of the Suffolk County Police Department, Petitioner, *v.* Edward Johnson, etc.	On Writ of Certiorari to the United States Court of Appeals for the Second Circuit.

[April 5, 1976]

MR. JUSTICE MARSHALL, with whom MR. JUSTICE BRENNAN joins, dissenting.

The Court today upholds the constitutionality of Suffolk County's regulation limiting the length of a policeman's hair. While the Court only assumes for purposes of its opinion that "the citizenry at large has some sort of 'liberty' interest within the Fourteenth Amendment in matters of personal appearance . . ." *ante*, at 6–7, I think it clear that the Fourteenth Amendment does indeed protect against comprehensive regulation of what citizens may or may not wear. And I find that the rationales offered by the Court to justify the regulation in this case are insufficient to demonstrate its constitutionality. Accordingly, I respectfully dissent.

I

As the Court recognizes, the Fourteenth Amendment's guarantee against the deprivation of liberty "protects substantive aspects of liberty against unconstitutional restrictions by the State." *Ante*, at 6. And we have observed that "[l]iberty under law extends to the full range of conduct which the individual is free to pursue." *Bolling* v. *Sharpe*, 347 U. S. 497, 499 (1954). See also

Poe v. *Ullman*, 367 U. S. 497, 543 (1961) (Harlan, J., dissenting).[1] It seems to me manifest that that "full range of conduct" must encompass one's interest in dressing according to his own taste. An individual's personal appearance may reflect, sustain, and nourish his personality and may well be used as a means of expressing his attitude and lifestyle.[2] In taking control over a citizen's personal appearance, the Government forces him to sacrifice substantial elements of his integrity and identity as well. To say that the liberty guarantee of the Fourteenth Amendment does not encompass matters of personal appearance would be fundamentally inconsistent with the values of privacy, self-identity, autonomy, and personal integrity that I have always assumed the Constitution was designed to protect. See *Roe* v. *Wade*, 410 U. S. 113 (1973); *Stanley* v. *Georgia*, 394 U. S. 557, 564 (1969); *Griswold* v. *Connecticut*, 381 U. S. 479, 485 (1965); *Olmstead* v. *United States*, 277 U. S. 438, 478 (1928) (Brandeis, J., dissenting).

[1] We have held that the Constitution's protection of liberty encompasses the interest of parents in having their children learn German, *Meyer* v. *Nebraska*, 262 U. S. 390 (1923), the interest of parents in being able to send their children to private as well as public schools, *Pierce* v. *Society of Sisters*, 268 U. S. 510, 534–535 (1925), the interest of citizens in traveling abroad, *Kent* v. *Dulles*, 357 U. S. 116, 125 (1958); *Aptheker* v. *Secretary of State*, 378 U. S. 500, 505 (1964), the interest of a woman in deciding whether or not to terminate her pregnancy, *Roe* v. *Wade*, 410 U. S. 113, 153 (1973), and the interest of a student in the damage to his reputation caused by a 10-day suspension from school. *Goss* v. *Lopez*, 419 U. S. 565, 574–575 (1975).

[2] While the parties did not address any First Amendment issues in any detail in this Court, governmental regulation of a citizen's personal appearance may in some circumstances not only deprive him of liberty under the Fourteenth Amendment but violate his First Amendment rights as well. *Tinker* v. *Des Moines School District*, 393 U. S. 503 (1969).

If little can be found in past cases of this Court or indeed in the Nation's history on the specific issue of a citizen's right to choose his own personal appearance, it is only because the right has been so clear as to be beyond question. When the right has been mentioned, its existence has simply been taken for granted. For instance, the assumption that the right exists is reflected in the 1789 congressional debates over which guarantees should be explicitly articulated in the Bill of Rights. Brant, The Bill of Rights 53–67 (1965). There was considerable debate over whether the right of assembly should be expressly mentioned. Congressman Benson of New York argued that its inclusion was necessary to assure that the right would not be infringed by the Government. In response, Congressman Sedgwick of Massachusetts indicated:

> "If the committee were governed by that general principle . . . they might have declared that *a man should have a right to wear his hat if he pleased* . . . but [I] would ask the gentleman whether he thought it necessary to enter these trifles in a declaration of rights, *in a Government where none of them were intended to be infringed.*" *Id.*, at 54–55 (emphasis added).

Thus, while they did not include it in the Bill of Rights, Sedgwick and his colleagues clearly believed there to be a right in one's personal appearance. And, while they may have regarded the right as a trifle as long as it was honored, they clearly would not have so regarded it if it were infringed.

This Court, too, has taken as an axiom that there is a right in one's personal appearance.[3] Indeed, in 1958

[3] There has been a substantial amount of lower court litigation concerning the constitutionality of hair length and dress code regulations as applied to schoolchildren. Some of the cases have found the

we used the existence of that right as support for our recognition of the right to travel:

> "The right to travel is a part of the 'liberty' of which the citizen cannot be deprived without due process of law under the Fifth Amendment. . . . *It may be as close to the heart of the individual as the choice of what he eats, or wears, or reads.*" *Kent* v. *Dulles*, 357 U. S. 116, 125–126 (emphasis added).

To my mind, the right in one's personal appearance is inextricably bound up with the historically recognized right of "every individual to the possession and control of his own person," *Union Pacific R. Co.* v. *Botsford*, 141 U. S. 250, 251 (1891), and, perhaps even more fundamentally, with "the right to be let alone—the most comprehensive of rights and the right most valued by civilized men." *Olmstead* v. *United States*, 277 U. S., at 478 (Brandeis, J., dissenting). In an increasingly crowded society in which it is already extremely difficult to maintain one's identity and personal integrity, it would be distressing, to say the least, if the Government could regulate our personal appearance unconfined by any constitutional strictures whatsoever.[4]

---

rationales offered for such regulations to be sufficient to support their constitutionality. See, *e. g.*, *King* v. *Saddleback Junior College District*, 445 F. 2d 932 (CA9), cert. denied, 404 U. S. 979 (1971); *Gfell* v. *Rickelman*, 441 F. 2d 444 (CA6 1971); *Ferrell* v. *Dallas Independent School District*, 392 F. 2d 697 (CA5), cert. denied, 393 U. S. 856 (1968). Other cases have found similar regulations unconstitutional. See, *e. g.*, *Richards* v. *Thurston*, 424 F. 2d 1281 (CA1 1970); *Breen* v. *Kahl*, 419 F. 2d 1034 (CA7 1969), cert. denied, 398 U. S. 937 (1970). None of the cases, however, have indicated that the Constitution may offer no protection at all against comprehensive regulation of the personal appearance of the citizenry at large.

[4] History is dotted with instances of governments regulating the personal appearance of their citizens. For instance, in an effort to stimulate his countrymen to adopt a modern lifestyle, Peter the Great issued an edict in 1698 regulating the wearing of beards throughout Russia. Durant, The Age of Louis XIV 398 (1963). Anyone who wanted to grow a beard had to pay an annual tax of from one kopek for a peasant to one hundred rubles for a rich merchant. *Ibid.* Of those who could not afford the "beard tax," there were many "who, after having their beards shaved off, saved them preciously, in order to have them placed in their coffins, fearing that they would not be allowed to enter heaven without them." Robinson, Readings in European History 390 (1906).

There are more recent instances, too, of governments regulating the personal appearance of their citizens. See, *e. g.*, N. Y. Times, February 18, 1974, at 22, col. 4 (Czech police stop long-haired young men, telling them to get haircuts); N. Y. Times, July 23, 1972, at 4, col. 1 (Libyan government tells youths to trim hair and wear more sober clothes or submit themselves for training in the army); N. Y. Times, July 7, 1971, at 22, col. 8 (over one thousand young men rounded up and given haircuts by South Korean police in what was described by government officials as a "social purification" campaign); N. Y. Times, October 13, 1970, at 11, col. 1 (police force hundreds of South Vietnamese youths to cut their hair). It is inconceivable to me that the Constitution would offer no protection whatsoever against the carrying out of similar actions by either our federal or state governments.

[4] A policeman does not surrender his right in his own personal appearance simply by joining the police force. See *Tinker* v. *Des Moines School District*, 393 U. S., at 506 (1969). I agree with the Court of Appeals that the "status of the individual raising the claim

II

Acting on its assumption that the Fourteenth Amendment does encompass a right in one's personal appearance, the Court justifies the challenged hair length regulation on the grounds that such regulations may "be based on a desire to make police officers readily recognizable to the members of the public, or a desire for the *esprit de corps* which such similarity is felt to inculcate within the police force itself." *Ante*, at 10. While fully accepting the aims of "identifiability" and maintenance of *esprit de corps*, I find no rational relationship between the challenged regulation and these goals.[4]

LAW OFFICES
MULHOLLAND, HICKEY & LYMAN
SUITE 400, 1125 FIFTEENTH STREET, N.W.
PHONE (202) 833-8855
WASHINGTON, D.C. 20005

TOLEDO OFFICE
741 NATIONAL BANK BLDG.
TOLEDO, OHIO 43604

EDWARD J. HICKEY, JR.
WILLIAM J. HICKEY
KENNETH L. CROSSON
MICHAEL S. WOLLY

CLARENCE N. MULHOLLAND
RICHARD R. LYMAN
EDWARD J. MCCORMICK, JR.
DONALD W. FISHER
R. JEFFREY BIXLER
RAYMOND J. SWEENEY

June 1, 1976

Dear Sir and Brothers:

I am enclosing a copy of the Supreme Court decision in the Muscare case which turned out better than we actually anticipated.

The decision requires some explanation in order to be completely clear as to what it resolved. First, the Court by concluding at the end of its Per Curiam decision that the writ of certiorari is dismissed as improvidently granted actually amounts to a statement that the Court of Appeals decision below which was in our favor on the procedural due process of a pre-suspension hearing is left standing in full force and effect. Accordingly, the Seventh Circuit decision on this very important issue can still be used unless another case involving the same issue is reviewed and reversed by the Supreme Court. Actually the reason why the Court did this appears to be an even split between the Justices participating (eight in number due to Mr. Justice Stevens' disqualification of himself because of the fact that he was a member of the Seventh Circuit at the time the Muscare decision was rendered by that Court).

A further reason why the Court did not record itself as being split 4 - 4, which would normally be the case and which would result in the judgment below being affirmed anyway, is the fact that, as related in the opinion of the Court, the Civil Service Commission of the City of Chicago revised its rules to provide for pre-suspension hearings in all non-emergency cases thereby in effect mooting that issue on appeal.

As to the merits of the case which the Court of Appeals below did not decide, the Supreme Court goes on to say that its decision in the Kelley case would govern the problem of the hair regulation and justify the position of the City of Chicago without need to have a hearing on that issue. How the Court can do this after concluding that it had improvidently granted a writ escapes me and to my knowledge has never occurred before but, in any event, they did and at least that part of the position of the Fire Fighters was lost.

As for the first justification offered by the Court, I simply do not see how requiring policemen to maintain hair of under a certain length could rationally be argued to contribute to making them identifiable to the public as policemen. Surely, the fact that a uniformed police officer is wearing his hair below his collar will make him no less identifiable as a policeman. And one can not easily imagine a plainclothes officer being readily identifiable as such simply because his hair does not extend beneath his collar.

As for the Court's second justification, the fact that it is the President of the Patrolmen's Benevolent Association, in his official capacity, who has challenged the regulation here would seem to indicate that the regulation would if anything, decrease rather than increase the police force's *esprit de corps*.[4] And even if one accepted the argument that substantial similarity in appearance would increase a force's *esprit de corps*, I simply do not understand how implementation of this regulation could be expected to create any increment in similarity of appearance among members of a uniformed police force. While the regulation prohibits hair below the ears or the collar and limits the length of sideburns, it allows the maintenance of any type of hair style, other than a pony tail. Thus, as long as their hair does not go below their collars, two police officers, one with an "Afro" hair style and the other with a crew cut could both be in full compliance with the regulation.[5]

The Court cautions us not to view the hair length regulation in isolation but rather to examine it "in the context of the county's chosen mode of organization of its police force." *Ante*, at 0. While the Court's caution is well taken, one should also keep in mind, as I fear the Court does not, that what is ultimately under scrutiny is neither the overall structure of the police force nor the uniform and equipment requirements to which its members are subject but rather the regulation which dictates acceptable hair lengths. The fact that the uniform requirement, for instance, may be rationally related to the goals of increasing police officer "identifiability" and the maintenance of *esprit de corps* does absolutely nothing to establish the legitimacy of the hair length regulation. I see no connection between the regulation and the offered rationales[6] and would accordingly affirm the judgment of the Court of Appeals.

---

bears [not on the existence of the right but rather] on the question of whether the right is outweighed by a legitimate state interest." 483 F. 2d, at 1130 n. 9. Thus, the need to evaluate the governmental interest and the connection between it and the challenged governmental action is as present when the party whose rights have allegedly been violated is a public employee as when he is a private employee. See *CSC v. Letter Carriers*, 413 U. S. 548, 564–567 (1973). To hold that citizens somehow automatically give up constitutional rights by becoming public employees would mean that more than 11 million American citizens are currently affected by having "executed" such "automatic waivers." Statistical Abstract of the United States 1975, 272.

[4] Nor, to say the least, is the *esprit de corps* argument bolstered by the fact that the International Brotherhood of Police Officers, a 25,000 member union representing uniformed police officers, has filed a brief as *amicus curiae* arguing that the challenged regulation is unconstitutional.

[5] The regulation itself eschews what would appear to be a less intrusive means of achieving similarity in the hair length of on-duty officers. According to the regulation, a policeman cannot comply with the hair length requirements by wearing a wig with hair of the proper length while on duty. The regulation prohibits the wearing of wigs or hair pieces "on duty in uniform except for cosmetic reasons to cover natural baldness or physical disfiguration." *Ante*, at 2 n. 1. Thus, while the regulation in terms applies to grooming standards of policemen while on duty, the hair length provision effectively controls both on-duty and off-duty appearance.

[6] Because, to my mind, the challenged regulation fails to pass even a minimal degree of scrutiny, there is no need to determine whether, given the nature of the interests involved and the degree to which they are affected, the application of a more heightened scrutiny would be appropriate.

Some of you may have some further questions on this decision after reading the analysis — if so, do not hesitate to write to me and we will attempt to answer them.

Sincerely,

Edward J. Hickey, Jr.
General Counsel, IAFF

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States* v. *Detroit Lumber Co.*, 200 U.S. 321, 337.

SUPREME COURT OF THE UNITED STATES

No. 75–130

Robert J. Quinn, Individually and as Commissioner of the Chicago Fire Department, Petitioner,
v.
Francis Muscare.

On Writ of Certiorari to the United States Court of Appeals for the Seventh Circuit.

[May 3, 1976]

PER CURIAM.

The respondent, a lieutenant in the Chicago Fire Department, was suspended from his job for a 29-day period in 1974 as a result of charges related to his violation of the department's personal appearance regulation.[1] Following the suspension, the respondent brought an action

[1] The personal appearance regulation provided:

"All members of the Chicago Fire Department shall present a clean and proper appearance in personal care and attire at all times. The face shall be clean-shaven, except that a non-eccentric mustache is permissible. Mustaches shall not extend beyond a line perpendicular to the corner of the mouth and the full upper lip must be readily visible. Sideburns shall be trimmed short and shall be no lower than a line from the middle of the ear.

"Hair shall be worn neatly and closely trimmed, and the hair outline shall follow the contour of the ear and slope to the back of the neck. It will be gradually tapered overall in order to present a neat appearance." Section 51.133 of the Rules and Regulations of the Chicago Fire Department.

The respondent was also charged with conduct unbecoming a member of the Chicago Fire Department, § 01.001, and disobedience of orders, § 01.000, in connection with his failure to conform his ap-

in the United States District Court for the Northern District of Illinois seeking an injunction and backpay on the ground that the regulation infringed his constitutional right to determine "the details of his personal appearance."[2] The department defended the challenged regulation as a safety measure designed to insure proper functioning of gas masks worn by firefighters and as a means of promoting discipline in the department and the uniform, well-groomed appearance of its members. After a hearing focusing on the operation of the self-contained breathing apparatus used by members of the department, the District Court found that the personal appearance regulation was justified "on safety grounds" and that the respondent's goatee violated the regulation. Explaining that the other regulations cited in the discharge notice were not "relevant or pertinent to the issues," the court denied the respondent's motion for injunctive relief.

The Court of Appeals for the Seventh Circuit reversed, holding that the respondent "was suspended without procedural due process."[3] The appellate court concluded that the Constitution requires "that some opportunity to respond to charges against him be made available to the governmental employee prior to disciplinary action against him." The Court of Appeals did not

[2] The respondent contended that the personal appearance regulation violated his "right to personal freedom guaranteed by the First, Third, Fourth, Fifth, Ninth, and Fourteenth Amendments." In addition, he claimed that the regulation proscribing conduct unbecoming a member of the department was vague and overbroad and that his suspension without a prior hearing was unconstitutional.

[3] Although the respondent had not been afforded a presuspension hearing he had a right to a post-suspension hearing before the Civil Service Commission. The commission was empowered to award backpay and to order the deletion of the suspension from the employee's service record.

dispute the District Court's determination that "the only issue" was whether the suspension for having a goatee was "justifiable under the circumstances." Although it did not reach the merits of the respondent's challenge to the constitutionality of the hair regulation, the Court of Appeals did note that the regulation "does not appear to be co-extensive with the need for safe and efficient use of gas masks and, if that is the sole justification, might well be more narrowly drawn."

Following the grant of certiorari and the oral argument in this case, this Court in another case upheld a police department hair regulation similar to that challenged by the respondent in the present litigation. *Kelley* v. *Johnson*, —— U. S. ——. In that case, we concluded that "the overall need for discipline, *esprit de corps*, and uniformity" defeated the policemen's "claim based on the liberty guaranty of the Fourteenth Amendment." *Id.*, at ——, ——, slip op., at 9, 10. *Kelley* v. *Johnson* renders immaterial the District Court's factual determination regarding the safety justification for the Department's hair regulation about which the Court of Appeals expressed doubt. Moreover, after the grant of certiorari, this Court was informed that the Civil Service Commission of the city of Chicago had revised its rules to provide for presuspension hearings in all nonemergency cases.[4] While this voluntary rule change was subject to recission, counsel for the petitioner candidly advised the Court at oral argument that even if the petitioner should prevail,

[4] Although the new rule was adopted in August of 1975, before the grant of certiorari on October 14, 1975, it was first brought to our attention in the respondent's brief filed on February 4, 1976. The revised procedures providing an opportunity for a presuspension hearing apply to all Chicago civil service employees except members of the police department, who are governed by a different set of similar rules.

it was very doubtful that the commission would revert to its former suspension procedures.

In view of these developments, the writ of certiorari is dismissed as improvidently granted.

So ordered.

MR. JUSTICE STEVENS took no part in the consideration or decision of this case.

LAW OFFICES
MULHOLLAND, HICKEY, LYMAN, McCORMICK, FISHER & HICKEY
SUITE 400, 1125 FIFTEENTH STREET, N.W.
PHONE (202) 833-8855
WASHINGTON, D. C. 20005

TOLEDO OFFICE
741 NATIONAL BANK BLDG
TOLEDO, OHIO 43604

EDWARD J. HICKEY, JR.
WILLIAM J. HICKEY
MICHAEL S. WOLLY
THOMAS A. WOODLEY

CLARENCE M. MULHOLLAND
RICHARD R. LYMAN
EDWARD J. McCORMICK, JR.
DONALD W. FISHER
R. JEFFREY SIXLER
RAYMOND J. SWEENEY

November 11, 1977

Michael Smith
INTERNATIONAL ASSOCIATION
OF FIRE FIGHTERS
1750 New York Avenue, N.W.
Washington, D. C. 20006

RE: DIFFERENCES IN HAIR LENGTH
REQUIREMENTS FOR MEN & WOMEN

Dear Mike:

Referencing our telephone conversation yesterday, please be advised that the Courts have generally held that the requirement of short hair on men and not on women does not constitute sex discrimination in violation of Title VII of the Civil Rights Act as amended (42 U.S.C. Section 2000e, et seq.). See Longo v. Carlisle DeCoppet & Company, 537 F.2d. 685 (2d. Cir. 1976); Knott v. Missouri Pac. R.R., 527 F.2d. 1249 (8th Cir. 1975); Willingham v. Macon Telegraph Publishing Co., 507 F.2d. 1084 (5th Cir. 1975); Baker v. California Land Title Co., 507 F.2d. 895 (8th Cir. 1974); Dodge v. Giant Food Inc., 488 F.2d. 1333 (D.C. Cir. 1973).

These Court decisions are consistent with the Supreme Court's ruling in Kelley v. Johnson, 44 L.W. 4469. In that case, the Supreme Court held that a county regulation limiting the length of a policeman's hair did not violate any constitutional right guaranteed policemen under the 14th Amendment. Specifically, the Court noted that similarity in appearance and a desire for esprit de corps provided a "sufficiently rational justification" for the hair length regulations so as to defeat the policemen's constitutional claims.

Fire department requirements concerning hair length are founded upon more important considerations than appearance and esprit de corps-namely, the safety of the individual seeking to wear long hair, as well as the safety of others. Under these circumstances, it is virtually impossible to force governmental authorities to modify hair length requirements for fire fighting personnel. See also Campbell v. Beaughler, 11 FEP 1308 (9th Cir. 1975) where the Court held that there was no constitutional issue presented by United States Marine Corps regulations prescribing hair length and style or by the Corps' interpretation that precluded use of wigs by male ready reservists since prohibition of wigs for men is rationally related to legitimate government interests in safety and in compatability.

If you have any questions on this subject Mike, please don't hesitate to contact me.

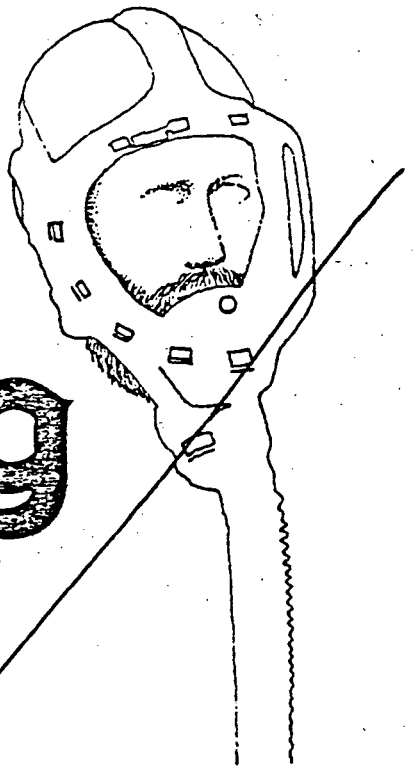
Sincerely yours,

MULHOLLAND, HICKEY, LYMAN,
McCORMICK, FISHER & HICKEY

By Tom
Thomas A. Woodley

TAW/pac

Facial Hair & Breathing Protection



by Bruce J. Held

Because of its research in respiratory protective devices used by the fire service and industry, the Lawrence Livermore National Laboratory (LLNL) receives numerous requests for information about breathing protection. By far, the greatest number of letters and phone calls from the fire service concern the use of breathing apparatus by fire fighters with beards, long sideburns or extra-long moustaches. Periodically, there are grievances filed and hearings held for reprimands and dismissals issued by both industry and the fire service because a user of a respiratory protective device refused to shave excess facial hair, claiming a violation of personal rights. These are complicated occasionally by a condition, found usually in black males, in which shaving causes mild to severe irritation to the skin.

Since the problem of facial hair and breathing apparatus is of such widespread interest and concern, this article will discuss the situation and try to put it into perspective. While this article may not provide the answers to specific problems, which may involve emotional factors, it will give some specific information known about facial hair and breathing protection.

Facepiece-to-Face Leakage Rates

One of the more frequently asked questions is how much leakage does a beard cause? This question cannot be answered because the amount of leakage will vary considerably among individuals, depending on many factors.

The texture of a beard, for example, will affect the leak rate. A fine-haired beard usually will compact and cause less leakage than a coarse-haired beard. Hair is roughly in the shape of a cylinder. Thus, the smaller the diameter of each hair cylinder, the smaller the spaces between the hair cylinders. Figure 1 shows, in an exaggerated form, the difference in the size of the air spaces between a coarse beard with large-diameter hair cylinders and a fine beard with small-diameter hair cylinders.

The length of the hair is another factor affecting the leak rate. Figure 2 shows, in a simplified version, how the longer hairs may compress more tightly than shorter hairs. This compression can tend to push the facepiece further away from the face. Also, if the hairs are springy and kinky, they will resist packing together and tend to push the facepiece away, again increasing the leakage rate. Thus, a newly trimmed beard may be more springy and cause greater leakage than a longer one. Figure 2 also illustrates how even a one-day's growth of beard stubble can cause some leakage. Each day's growth will change the fitting characteristics, so someone who may have had a satisfactory fit one day will not have the same fit on succeeding days.

The volume of hair on the face is another determining factor in the fit. A person with thin sideburns pene-

This work was performed by Lawrence Livermore National Laboratory under the auspices of the U.S. Department of Energy, contract number W-7405-ENG-48.

Dobbs
John O
Lassy: pl
For info. Return
Bill

7/20/83

April 19, 1983

MEMORANDUM FOR: L. J. Cunningham, Chief Section B, Engineering and Technical Support Branch, IE

FROM: L. R. Greger, Chief, Facilities Radiation Protection Section

SUBJECT: REQUEST FOR GUIDANCE CONCERNING 10 CFR 20.103 AND THE USE OF PRESSURE DEMAND SCBAs

Attached is a licensee's response to an item of noncompliance concerning wearing of beards by fire brigade members. The licensee's response included a proposed policy regarding the use of respiratory protection equipment. (Fire brigade members are frequently required to wear pressure demand SCBAs in their emergency roles.) The proposed policy would allow the use of pressure demand SCBAs by persons with full beards provided the service time is not reduced to less than 20 minutes. The service time would be determined by a test conducted biennially. We disagree with this policy due primarily to the uncertainty involved in service time determinations, but there appears to be no clear regulatory basis for this disagreement. Also in their policy, the licensee states that 10 CFR 20.103(a)(3) permits the use of postexposure whole body counts for the purpose of determining compliance with 10 CFR 20.103 intake limits. This is clearly true when approved respirators are worn in accordance with 10 CFR 20.103(c), but it is not clear whether this is true if an approved respirator is improperly worn (e.g., facial seal interference).

We request guidance concerning the acceptability of the licensee's policy concerning wearing of pressure demand SCBAs by persons with full beards, and the licensee's use of whole body counts in these circumstances for the purpose of determining compliance with 10 CFR 20.103 intake limits.

L. R. Greger, Chief
Facilities Radiation Protection Section

Attachment: As stated

cc w/attach:
W. Fisher, IE
M. Shanbaky, RI
K. Barr, RII
B. Murray, RIV
F. Wenslawski, RV

and a check of the battery water level. We are continuing to investigate, through the manufacturer, any additional surveillance requirements. In addition, all such lighting units which are accessible during power operation were tested to verify operability.

Corrective Action To Be Taken To Avoid Further Noncompliance:

A search was made to that assure all emergency lights have been included in the test.

The Date When Full Compliance Will Be Achieved:

Testing will be completed during the next outage, as some of the lights are located in high radiation areas. Any additional recommendations of the manufacturer will be evaluated and appropriate tests developed within 60 days of receipt.

Item No. 3a, b, c & d - Noncompliance (50-155/82-13-06)

"3. Technical Specification 6.8.1 requires the establishment of and adherence to administrative procedures for fire protection.

Contrary to the above, several fire protection program administrative procedures were not established and/or adhered to:"

Item No. 3a - Noncompliance (50-155/82-13-06A)

"a. Firefighter protective equipment such as protective clothing and respiratory protective equipment was not being utilized in the manner prescribed by the fire protection implementing procedures."

The inspection report identified three specific concerns regarding the use of firefighter protective equipment. They are:

3a.1 "Examination of the fire brigade training and medical records revealed that one fire brigade member did not have a respiratory fit test during the year 1981 because he was wearing a full facial beard at the time the test was given."

Response to Item No. 3a.1

Corrective Action Taken and Results Achieved:

A search of plant records was conducted to identify which employees (fire brigade members) needed a respiratory fit test.

Corrective Action To Be Taken To Avoid Further Noncompliance:

The proposed policy regarding use of respiratory protection equipment (see response to Item No. 3a.2) will be implemented upon approval by the NRC, and all fire brigade members will be so qualified.

Our plant requirements will be changed to require biennial testing in accordance with Federal regulations.

The Date When Full Complilance Will be Achieved:

The date of full compliance is dependant on the results of the NRC review of the proposed policy but will be no later than 30 days following said approval. All required respiratory fit tests will be completed by March 1, 1983.

Don't Reg Guide 3.15 and NUREG 0041 shed a little light on the matter?

3a.2 "During this routine inspection, the inspectors observed a total of three (3) fire brigade members with full facial beards participation in the annual fire brigade practice session conducted on Wednesday, August 18, 1982. These persons cannot be considered qualified fire brigade members because their facial hair invalidates their qualification for the use of respiratory protection equipment".

Response to Item No. 3a.2

Corrective Action Taken and Results Achieved:

We have reviewed the applicable regulations regarding the use of respiratory protection devices, and there appears to be no specific requirement that would invalidate the respiratory protection qualification of fire brigade members wearing beards. In particular we noted the following:

10 CFR 20 - it is stated in Appendix A, footnote B, that "Only for shaven faces and where nothing interferes with the seal of tight fitting face pieces against the skin." This is interpreted to permit the use of published Protection Factors when the listed devices are used on individuals who are clean shaven in the area of the seal. However, 10 CFR 20 does not appear to state that individuals must be clean shaven to wear the respirator. Also, 10 CFR 20.103a.3 permits the use of post exposure whole body counts for the purpose of determining compliance with 10 CFR 20.103.

29 CFR - in this regulation which addresses non-radiological hazards it is stated in Section 1910.134e.5.i that, "Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beards, sideburns, a skull cap that projects under the face piece or temple pieces on glasses." Thus, if a good face seal exists

(defined as the lack of inward leakage) facial hair in the area of the seal may be worn.

Therefore, we are proposing the following policy regarding use of respiratory protection equipment. In addition to the regulations discussed above, this policy was developed based on the following two considerations:

1. The results of an experiment we performed with a Survive Air respirator which indicate that these 30 minute respirators, operating in the positive pressure mode, provide 22 minutes of protection for a person with a coarse full beard. This experiment was performed in a quantitative fit-test booth and the observed protection factor did not vary from those normally seen for clean shaven persons.

2. According to our Fire Plan, we may be required to call upon the local volunteer fire department for assistance. Some of these individuals, over whom we have no control, have beards.

The proposed policy is as follows:

a. Persons who may be required to wear respiratory protection devices with tight fitting face pieces shall be certified in their use. To maintain certification, each individual to be certified shall shave in the area of the seal and receive a quantitative fit test once every two years and/or if a significant change in the individual's facial features is noted.

b. Persons required to wear respiratory protection devices with tight fitting face pieces shall also be clean shaven in the area of the seal when such devices are required to be worn, except as described in c below.

c. Persons with facial hair in the area of the seal may initially don, (1) in emergency (radiological or fire) situations and, (2) in drills, positive pressure open circuit SCBAs provided that the service time is not reduced to less than 20 minutes. For persons with such facial hair, a length of service time test under simulated work conditions shall be performed with their beards intact at least every two years.

d. Individuals initially responding to emergencies, who have facial hair in the area of the seal, shall be replaced as soon as practical with individuals that are clean shaven in the area of the seal.

e. Determination of individual intakes of radioactivity may be based on air sample and bioassay techniques.

f. Appropriate respirator eyeglasses should be maintained available. Also, contact lenses shall not be worn in any Respiratory Protection Device.

Corrective Action To Be Taken To Avoid Further Noncompliance:

The proposed policy regarding use of respiratory protection equipment will be implemented upon approval by the NRC.

The Date When Full Compliance Will Be Achieved:

The date of full compliance is dependant on the results of the NRC review of the proposed policy but will be no later than 30 days following said approval.

3a.3 "Appendix A, cards 5 and 6, "Fire Emergency Actions and Responsibilities," of the fire protection implementing procedures do not require the fire brigade leader or other fire brigade members to respond to practice drill or actual fire scenes wearing protective turnout coats or OSHA hard hats."

Response to Item No. 3a.3

Corrective Action Taken and Results Achieved:

Section 5.6 of the Fire Protection Implementing Procedures states "Selfcontained breathing units shall be worn for protection against airborne activity, oxygen deficient areas, toxic gases or when specified by the Property Protection Supervisor or brigade leader." Appendix A, Card 5 (Fire Brigade Leader) states "His immediate actions are to don a self-contained breathing apparatus and bring the caddy to the scene of the fire."

We concur that protective clothing and respiratory equipment are important and should be worn when fighting fires. However, the NRC's concern is that all brigade members responding to a fire alarm should be required to first put on protective clothing and respiratory equipment.

We believe that response to a fire alarm should be immediate without undue delay. The detectors in use at Big Rock Point are very sensitive and if there is a fire, it could still be small enough that a fire extinguisher could put it out. If time is taken to go to a fire depot to don protective clothing and respirator, fire brigade members might arrive five or ten minutes later to the fire and the fire more involved.

Presently, the brigade leader dons protective clothing and a respirator and reports to the scene. Normally, an Auxiliary Operator would