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INDUSTRIAL SAFETY EQUIPMENT ASSOCIATION
1901 North Moore Street
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STATEMENT OF THE INDUSTRIAL SAFETY EQUIPMENT ASSOCIATION

Presented November 29, 1977

at

THE PUBLIC MEETING

Conducted by the

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

and the

MINING ENFORCEMENT AND SAFETY ADMINISTRATION (MESA)

on

PROPOSED REVISIONS TO 30 CFR PART 11

The Industrial Safety Equipment Association (ISEA) appreciates the opportunity to comment on and recommend changes to 30 CFR Part 11. A complete and thorough study and rewrite of the document is a task of great magnitude and would require a much longer time frame than has been allowed. For these reasons, we respectfully submit for consideration, at this time, rather broad recommendations. This initial step we envision as the base for a continuing dialogue and cooperative effort to determine the final details of the performance test criteria and procedures, as well as the specifics of the language.

I am Frank E. Wilcher, Jr., Executive Director of the Association.

Accompanying me are several representatives of ISEA Member Companies who are well acquainted with the technical problems this document engenders. They will be able to assist me in any technical questions that may arise.

Our comments today are being presented in three major sections: (1) Major Issues, identified as Technical Performance and Administrative; (2) General Statements and Concepts; and (3) Definitions.

Because of time constraints and the complexities of 30 CFR Part 11, we are not in a position today to present our detailed recommendations on changes in the document. We would like to respectfully request of NIOSH and MESA that you keep the record for this Public Meeting open until February 28, 1978 in order to allow additional time for us to prepare specific comments.

MAJOR ISSUES

TECHNICAL PERFORMANCE

- (1) ESTABLISHMENT OF MINIMUM PROTECTION FACTORS FOR ALL TYPES OF RESPIRATORS BY MEANS OF QUANTITATIVE FIT TESTS.

We recommend that 30 CFR Part 11 be amended to provide for the establishment of panels of human subjects having appropriate anthropometric characteristics representing at least 95% of adult working population to carry out quantitative respirator fit tests;

That human subjects, both male and female, wearing respirators in test atmospheres should carry out exercises which simulate movements in work operations, and the penetration of test agents into the respiratory inlet coverings of the respirators should be measured by appropriate instruments during the exercises;

That to determine whether or not a given make or model respirator achieves the protection factor established for the type of respirator it is, at least three series of respirator quantitative fit tests should be carried out by the panel of human subjects. In order to be approved, the given make and model respirator must achieve protection factors equal to or greater than the established minimum protection factor for the type of respirator;

That consideration should be given to the proper selection of test subjects, so as to be compatible with varying dimensional sizing of respiratory inlet coverings; and

That an applicant shall be permitted to submit for an approval a respirator which fits a specific portion of the panel referenced in the first paragraph above.

- (2) PERMIT APPROVAL OF ALL TYPES OF RESPIRATORS ABLE TO MEET PERFORMANCE REQUIREMENTS FOR ANY TYPE OF RESPIRATORY HAZARD.

We recommend that 30 CFR Part 11 be amended to provide that respirators should not be limited by design requirement from receiving an Approval for any type of respiratory hazard if the device is capable of meeting all the performance requirements as published.

MAJOR ISSUES

TECHNICAL PERFORMANCE

- (3) CLARIFY CLASSIFICATION AND DESCRIPTION OF PARTICULATE FILTER RESPIRATORS AND CLARIFY CLASSIFICATION AND DESCRIPTION OF CHEMICAL CARTRIDGE RESPIRATORS.

The ISEA believes that the classification and description of the types of particulate filter respirators and chemical cartridge respirators which can be approved under the provisions of 30 CFR 11 is confusing to respirator users, government officials having jurisdiction over respirator programs, respirator manufacturers, and the general public. Therefore, Subparts K, L, M, and N of 30 CFR 11 should be amended to clarify the classification and description of particulate filter respirators and chemical cartridge respirators.

- (4) DYNAMIC LEAK TESTING OF EXHALATION VALVES.

We recommend that 30 CFR Part 11 be amended to require that when leakage tests of exhalation valves are required they shall be tested under dynamic conditions and the permitted leakage shall be appropriate to the Respirator Protection Factor.

- (5) BREATHING MACHINE TESTS.

We recommend that 30 CFR Part 11 be amended so that any air purifying respirator which permits exhaled air to contact the air purifying element shall be tested with a breathing machine with the exhaled air having a temperature and humidity equivalent to body conditions.

- (6) BREATHING RESISTANCE REQUIREMENTS.

We recommend that all breathing resistance requirements should be reviewed and the established values should be based on physiological limitations.

- (7) CLARIFY APPROVAL OF AIR-PURIFYING RESPIRATORS FOR PROTECTION AGAINST GASES AND VAPORS HAVING POOR WARNING PROPERTIES.

We recommend that Sections 11.90 (b) (Footnote 4) of Subpart I and 11.150 (Footnote 7) of Subpart L of 30 CFR 11 be amended to prohibit the use of air-purifying respirators for protection of persons against vapors and gases which do not have adequate warning properties except where Federal exposure standards permit the use of air-purifying respirators, provided that specific work practices listed in the standards are carried out.

MAJOR ISSUES

TECHNICAL PERFORMANCE

(8) RESPIRATOR EYEPieces.

We recommend that any reference to the performance requirements of eyepieces in 30 CFR 11 be revised to read as follows: "All eyepieces of respirators designed for entry into hazardous atmospheres shall meet the impact and penetration requirements specified in the latest edition of Federal Specification GGG-M-125, Mask, Air Line, and Respirators, Air Filtering, Industrial."

(9) NOISE LEVEL MEASUREMENTS.

We recommend that any reference to noise level measurements for supplied air respirators and powered airpurifying respirators in 30 CFR 11 be revised as follows: "Noise levels generated by supplied air respirators and powered air purifying respirators will be measured inside the hood, helmet, or suit at the ear level at maximum airflow obtainable within pressure and hose length requirements and shall not exceed 80 dBA. Measurements shall be taken in an ambient noise level not exceeding 40 dBA."

(10) APPROVAL OF RESPIRATORS EQUIPPED WITH SUIT-TYPE RESPIRATORY INLET COVERING.

We recommend that 30 CFR Part 11 be amended to permit the approval of respirators equipped with suits.

(11) RESTRICTION OF APPROVAL OF SUPPLIED AIR RESPIRATORS.

We recommend that Subpart J of 30 CFR Part 11 be amended so that supplied air respirators are not approved for protection against atmospheres that are immediately dangerous to life or health because the source of air may be unreliable.

(12) REDUCE SERVICE LIFE OF CANISTERS FOR GAS MASKS DESIGNED FOR PROTECTION AGAINST MORE THAN ONE TYPE OF GAS OR VAPOR.

We recommend that Tables 5, 6 and 7 of Section 11.102-5 of Subpart I of 30 CFR 11 be amended to state that where a gas mask is designed to protect persons against more than one type of vapor or gas, such as organic vapors and acidic gases, then the minimum vapor or gas service life of the canister shall be one-half of the listed value for each type vapor or gas.

MAJOR ISSUES

TECHNICAL PERFORMANCE

(13) PERFORMANCE TESTING OF POWERED AIR PURIFYING RESPIRATORS.

We recommend that 30 CFR Part 11 be amended to state: "When testing the performance of a powered air purifying respirator, the respirator shall be operated in the test atmosphere at its normal air flow which shall never be less than 115 liters per minute during the test period when the device is equipped with a tight fitting respiratory inlet covering, and 170 liters per minute during the test period when the device is equipped with a loose fitting respiratory inlet covering. The test period shall be four hours."

MAJOR ISSUES

ADMINISTRATIVE

(1) PERMIT PUBLIC TO REVIEW AND COMMENT ON PROPOSALS TO APPROVE NEW TYPES OF RESPIRATORS AND PROPOSED TEST PROCEDURES AND CRITERIA.

We recommend that NIOSH be required to publish as proposed rulemaking in the Federal Register and thus provide adequate time for the public to review and comment on any of the following: (1) Proposed test procedures and criteria for use in approving new types of respirators; (2) Proposed test procedures and criteria for use in approving respirators against air contaminants other than those listed in 30 CFR Part 11; and (3) Any significant changes in existing test procedures and criteria.

(2) APPEALS PROCEDURE.

We recommend that 30 CFR Part 11 be amended to include a procedure by which an applicant may appeal the withdrawal or rejection of an approval. A suggested procedure has previously been submitted by ISEA to the Deputy Director of NIOSH and to the NIOSH Solicitor's office.

(3) SI UNITS

We recommend that SI units be used for all values throughout 30 CFR Part 11.

Footnote: Related to the Major Issues covered above, we are appending to this statement a listing of the Sections in 30 CFR Part 11 that are applicable to our recommendations.

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GENERAL STATEMENTS AND CONCEPTS

EMPHASIS COMMENTS

Subpart D - 11.35

This paragraph presupposes that all changes will have an effect on function. The opposite is true. The vast majority of changes are of a non-functioning nature. This paragraph requires a formal extension of approval for these non-functional changes, and the paragraph should be revised to include submission of non-functional changes that will not require a written approval from TCB.

Subpart E - 11.41 (a)

This paragraph should be replaced with the ISEA General Quality Assurance Guidelines. This recommendation was made to NIOSH/TCB in a meeting with the ISEA.

Subpart E - 11.41 (h)

This paragraph requires large sample sizes. In many cases this is not practical and therefore we recommend a more practical sampling plan.

Subpart F - 11.51 (a)

We recommend that this section be revised to read: Entry and Escape. Respirators designed and approved for use during entry into a hazardous atmosphere (i) not immediately dangerous to life or health, and for escape from a hazardous atmosphere; or (ii) immediately dangerous to life or health and escape from this atmosphere.

Subpart F - 11.52

We recommend that this paragraph be revised to read: Respiratory hazards; classification. Respirators described in Subparts H through N of this part shall be approved for use against any or all of the following respiratory hazards: (a) oxygen deficiency; (b) gases and vapors; and (c) particulate matter. We recommend that the existing (d) be dropped from 11.52.

Subpart G - 11.64 (c)

We recommend that this section be revised to read:

- (1) The Bureau shall, at the written request of the applicant, supply a current description of the procedures and equipment used in testing respirators for approval. This description shall include:

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GENERAL STATEMENTS AND CONCEPTS

EMPHASIS COMMENTS

Subpart G - 11.64 (c) - Cont'd

- (i) drawings of the layout including any fabricated or modified parts
 - (ii) a list of all components, with manufacturer's name and model
 - (iii) specifications which determine the selection of all components and substances used
 - (iv) a description of all operations necessary to achieve consistent and reproducible results, including any special skills, techniques or training of operators.
- (2) Any changes in equipment and procedures not described in 30 CFR Part 11 which affect method of testing or analyzing test data shall be furnished to holders of approved respirators.

Subpart H - 11.70 (a) (1)

We recommend that this section be revised to add the words "and may be of the positive pressure or demand type" at the end of (iii) - Liquid Oxygen.

Subpart H - 11.70 (a) (2)

We recommend that this section be revised to read: Open circuit apparatus. An apparatus of the following types from which exhalation is vented to the atmosphere: (i) demand-type apparatus; (ii) positive pressure type apparatus.

Subpart H - 11.79

We recommend that the following changes be made in this section: To delete 11.79 (a) in its entirety; 11.79 (b) - to add the following at the end of the existing sub-section: "and chemically generated oxygen shall meet the requirements of the latest edition of Military Specification, MIL-E-83252 or MIL-O-15633, whichever is applicable"; 11.79 (c) - to revise this sub-section to read: "Compressed, gaseous breathing air shall meet the applicable minimum requirements for Type I Grade D of ANSI Standard Z86.1"; 11.79 (d) - to revise this sub-section to read: "Compressed, liquefied breathing air shall meet the applicable minimum requirements for Type II Grade B of ANSI Standard Z86.1."

Subpart H - 11.85-4 (a)

We recommend that the first three lines of this section be substituted with the following: "The completely assembled apparatus, charged to half of its service life shall not weigh more than 16 kg. (35 pounds); however.".

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Subpart H - 11.85-6 (c)

We recommend that this section be revised to read: "The exhalation resistance of positive pressure apparatus shall not exceed the static pressure in the facepiece by more than 50 mm. (2 inches) water-column height for demand devices and 90 mm. (3.5 inches) water-column height for positive pressure devices."

Subpart H - 11.85-9 (c)

We recommend that this section be revised to read: "All demand flow devices shall provide at least 115 liters per minute of oxygen when the pressure in the respiratory inlet covering is at its permissible minimum."

Subpart H - 11.85-12

We recommend adding a sub-section to 11.85-12 to provide that "Consideration should be given to increasing the CO₂ limits within the respiratory inlet covering for emergency escape breathing apparatus." (This recommendation is offered because of current Navy development work.)

Subpart I - 11.90 (c)

We recommend that a statement be added to 11.90 (c) to conform with our recommendations under Major Issues, Item #1 (Proposed Test Procedures - Administrative); and Item #7 (Poor Warning Properties - Technical Performance).

Subpart J - 11.116 (b)

We recommend that this section be revised to read: "All eyepieces shall be designed and constructed to meet the lens impact requirements specified in the latest edition of Federal Specification GGG-M-125."

Subpart J - 11.124-21

With respect to this section, we request that NIOSH develop a more realistic, rigorous, abrasive test with objective criteria.

Subpart K - 11.130

With respect to this section, we recommend that any particulate filter respirator be accepted for approval without reference to design features as long as it meets the performance requirements. Design features should be eliminated in the descriptions of these respirators.

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Subpart K - 11.135

We recommend that the existing sections (b), (c), and (e) of 11.135 be eliminated and that the wording for a new section (b) be as follows: "Respiratory inlet coverings shall provide for optional use of corrective spectacles or lenses, where applicable, which shall not reduce the respiratory protective qualities of the respirator, and shall be designed to minimize eyepiece fogging."

Subpart K - 11.140, 11.140-4, 11.140-5, 11.140.6 and 11.140-7

With respect to these sections, we offer the following observation: A study of the use of silica dust and silica mist for evaluating the performance of particulate filter respirators, as carried out by LASL, indicates that work should be undertaken to improve these tests. The ISEA feels that similar consideration should be given to the lead fume test. In light of time requirements necessary to enact major improvements in test procedures, recommendations shall be made to improve the overall quality of existing test procedures.

Subpart L - 11.150

With respect to this section, we recommend that the Table for Maximum Use Concentrations for chemical cartridge respirators be revised and be reflective of the capability of the device, i.e., full facepiece vs. half-mask, etc. We recommend that any chemical cartridge respirator be accepted for approval without reference to design features as long as they meet the performance requirements. Design features should be eliminated in the description of these respirators.

Further, we recommend that the NOTE under the Table in this section should be revised to conform with our recommendations under Major Issues, Item #1 (Proposed Test Procedures - Administrative); and Item #7 (Poor Warning Properties - Technical Performance).

Subpart L - 11.162-4

With respect to this section, we recommend that a study of the lacquer and enamel tests should be made with a goal of improving these tests.

Subpart M

We recommend that Subpart M should be reviewed and the performance requirements made more reflective of pesticide use.

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RECOMMENDED DEFINITIONS FOR INCLUSION IN 30 CFR PART 11

Abrasive Blasting Respirator

A respirator designed to protect the wearer against inhalation of, and impact and abrasion of the head and neck from particulate matter during abrasive blasting.

Air Purifying Respirator

A respirator with element(s) designed to remove contaminants from the inspired air.

Canister (Air Purifying)

A container comprising a filter and/or sorbent and/or catalyst which removes specific contaminants from the air drawn through it.

Canister (Oxygen Generating)

A container filled with a chemical which generates oxygen by chemical reaction.

Cartridge

A small canister.

Chemical Cartridge Respirator

An air purifying respirator with cartridge(s) to remove a single gas or vapor, a single class of gases or vapors, or a combination of two or more classes of gases or vapors from air where adequate oxygen is present and particulate matter is absent. This type respirator may be equipped with an additional filter to remove particulate matter. (See filter type dust, fume and mist respirator.)

Facepiece

A type of respiratory inlet covering designed to provide a gas-tight or particle-tight fit with the face.

Fibrosis Producing Dust

A dust which when inhaled, deposited and retained in the lungs may produce fibrous growth within the lungs which impairs lung function.

Filter

A media component used in respirators to remove particulate matter from the inspired air.

DEFINITIONS (Cont'd)

Filter, Reusable

A filter which may be used several times before the end of its useful life is reached.

Filter Type Dust, Fume and Mist Respirator

An air purifying respirator with filter(s) to remove a single type of particulate matter or any combination of particulates where adequate oxygen is present and toxic gases and vapors are absent.

Gas Mask

An air purifying respirator with canister(s) to remove a single gas or vapor, a single class of gases or vapors, or a combination of two or more classes of gases or vapors from air where adequate oxygen is present and particulate matter is absent. This type respirator may be equipped with an additional filter to remove particulate matter. (See filter type dust, fume and mist respirator.)

Gas Mask, Chin Style

A gas mask having a canister(s) which is directly attached to the respiratory inlet covering.

Gas Mask, Front-Mounted or Back-Mounted

A gas mask with the canister(s) supported on the front or back of the wearer's body.

Hazardous Atmosphere

Any atmosphere, either immediately or not immediately dangerous to life or health, which is oxygen deficient or which contains a toxic or disease producing contaminant.

High Heats of Reaction

Sorbents used in canisters may react to develop high temperatures on the surface of the canister when exposed to certain types of gases and vapors. These temperatures may be sufficiently high to cause burns on any part of the body in contact with the canister. The high heat of reaction is readily noticed by the increase in temperature of the inspired air which is a warning to the wearer that he is in a dangerously high concentration of a gas or vapor.

Hood or Helmet

A respiratory inlet covering which covers the wearer's head, or the head and neck, or the head, neck and shoulders.

Immediately Dangerous to Life or Health (IDLH)

Any atmosphere that poses an immediate hazard to life or produces irreversible debilitating effects on health.

Integral Filter

A filter which is a permanent component of the respirator.

Mouthpiece/Nose Clamp

A mouthpiece/nose clamp is a type of respiratory inlet covering that is designed to provide a gas-tight seal with the wearer's lips when the mouthpiece is inserted into the mouth and the nostrils are sealed with the nose clamp.

Non-Restorable Reusable Filter

A filter which may be used repeatedly until the end of its useful life is reached and which may be used beyond a single work shift.

Oxygen Deficient Atmosphere

An atmosphere which contains less than 19.5% oxygen by volume.

Particulate Matter

A suspension of solid or liquid particles in air, such as dust, fog, fume, mist, smoke or sprays. Particulate matter suspended in air is commonly known as an aerosol.

Permissible Time Weighted Average

The standards of contaminant levels prescribed by the Secretary of Labor in accordance with the provisions of the Occupational Safety and Health Act of 1970 (Public Law 91-596; 84 Stat. 1590).

Pneumoconiosis Producing Dust

A dust which, when inhaled, deposited and retained in the lungs, may produce signs, symptoms and findings of pulmonary disease.

Poor Warning Properties

Substances which cannot be readily detected by odor, taste, or irritation at concentrations within three times the permissible exposure limit, but never to exceed the ceiling limit. Substances which cause rapid olfactory fatigue and have no other warning properties are classed as having poor warning properties.

Powered Air Purifying Respirator

A respirator having a powered blower capable of providing a continuous flow of air through air purifying elements to a respiratory inlet covering.

Remaining Service Life Indicator or Warning Device

An indicator or warning device on a respirator which warns the respirator wearer that the end of the service life of the device is approaching.

Replaceable Filter

A filter which may be removed from a respirator and replaced.

Respirable Breathing Gas

A gas which meets the minimum requirements of the latest ANSI Z86.1 Standard for Type I Grade D Gaseous Air, or Type II Grade B Liquid Air, or U. S. Pharmacopia for Medical or Breathing Oxygen, or chemically generated oxygen meeting the requirements of Military Specification MIL-E-83252 or MIL-O-15633.

Respiratory Inlet Covering

That portion of a respirator which connects the wearer's respiratory tract to an air purifying device or respirable breathing gas source or both. Examples include a facepiece, helmet, hood, suit, mouthpiece/nose clamp, or other device.

Restorable Reusable Filter

A filter which, after one or more uses, may be cleaned or otherwise reconstituted. This process may be repeated until such cleaning or reconstitution becomes ineffective.

Self-Contained Breathing Apparatus (SCBA)

A device with an independent source of respirable breathing gas carried by the wearer.

SCBA, Closed Circuit

An SCBA of the type in which the wearer's exhalation is rebreathed after the carbon dioxide has been effectively removed and a suitable oxygen concentration restored.

SCBA, Demand Type

An SCBA in which the pressure inside the respirator in relation to the immediate environment is positive during exhalation and negative during inhalation.

SCBA, Open Circuit

An SCBA of the type from which the wearer's exhalation is vented to the outside atmosphere.

SCBA, Positive Pressure

An SCBA in which the pressure inside the respirator in relation to the immediate environment is positive during exhalation and inhalation.

Single Use Filter

A filter designed to be discarded when the end of its useful life is reached and which must not be used beyond a single work shift.

Smoke

A system which includes the products of combustion, pyrolysis, or chemical reaction, of substances in the form of visible and invisible solid and liquid particles and gaseous products in air. Smoke is usually of sufficient concentration to perceptibly obscure vision.

Spray

A liquid mechanically produced particle with sizes generally in the visible or macroscopic range.

Supplied Air Respirator

A device which provides the wearer with air from an external source such as a compressor, blower or compressed air cylinder(s).

Type A Supplied Air Respirator

A respirator, whose respiratory inlet covering is supplied by a remote motor-hand driven or hand operated blower, which permits the wearer to breathe through the air supply hose from ambient air, if the blower is not operating. Commonly called a hosemask.

Type AE Supplied Air Respirator

Same as Type A but with the capability of protecting the wearer's head and neck against impact and abrasion from rebounding abrasive material and slough.

Type B Supplied Air Respirator

A respirator whose respiratory inlet covering is supplied by inspiring ambient air from a remotely located intake at the end of the air supply hose. Commonly called a hosemask without blower.

Type BE Supplied Air Respirator

Same as Type B but with the capability of protecting the wearer's head and neck against impact and abrasion from rebounding abrasive material and slough.

Type C Supplied Air Respirator

A respirator whose respiratory inlet covering is supplied from a remotely located source of compressed air. Commonly called an air line respirator.

Type CE Supplied Air Respirator

Same as Type C but with the capability of protecting the wearer's head and neck against impact and abrasion from rebounding abrasive material and slough.

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INDUSTRIAL SAFETY EQUIPMENT ASSOCIATION

SECTIONS IN 30 CFR PART 11 THAT ARE APPLICABLE TO ISEA'S RECOMMENDATIONS UNDER
"MAJOR ISSUES" AND WHICH REQUIRE REVISION TO CONFORM TO OUR RECOMMENDATIONS

TECHNICAL PERFORMANCE

Major Issue #1 - Quantitative Fit Tests

- Subpart H - 11.75 (a) and 11.85-19
- Subpart I - 11.98 (a) and 11.102-3
- Subpart J - 11.115 (a) and (c); and 11.124-16 through 11.124-20
- Subpart K - 11.135 (a) and (c); and 11.140-1 and 11.140-2
- Subpart L - 11.158 (a) and (b); and 11.162-3
- Subpart M - 11.178 (a) and (c); and 11.183-3

Major Issue #2 - Performance Requirements

Subparts H through N

Major Issue #3 - Classification of Respirator Descriptions

Subparts K, L, M, and N

Major Issue #4 - Dynamic Exhalation Valve Tests

- Subpart H - 11.85-7
- Subpart I - 11.102-2
- Subpart J - 11.124-15
- Subpart K - 11.140-10
- Subpart L - 11.162-2
- Subpart M - 11.183-2

Major Issue #5 - Breathing Machine Tests

- Subpart I - 11.102
- Subpart K - 11.140-3
- Subpart L - 11.162
- Subpart M - 11.183
- Subpart N - 11.202 and 11.203

Major Issue #6 - Breathing Resistance

- Subpart H - 11.85-5; 11.85-6; and 11.85-8
- Subpart I - 11.102-1
- Subpart J - 11.124-10 through 11.124-14
- Subpart K - 11.140-9
- Subpart L - 11.162-1
- Subpart M - 11.183-1

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SECTIONS IN 30 CFR PART 11 THAT ARE APPLICABLE TO ISEA'S RECOMMENDATIONS UNDER "MAJOR ISSUES" AND WHICH REQUIRE REVISION TO CONFORM TO OUR RECOMMENDATIONS

TECHNICAL PERFORMANCE

Major Issue #7 - Poor Warning Properties

Subpart I - 11.90 (b) - Footnote 4
Subpart L - 11.150 - Footnote 7

Major Issue #8 - Eyepieces

Subpart H - 11.76 (b)
Subpart I - 11.99 (b)
Subpart K - 11.136
Subpart L - 11.158-1
Subpart M - 11.179

Major Issue #9 - Noise Level Measurements

Subpart J - 11.120
Subpart K - 11.139
Subpart L - 11.161
Subpart M - 11.182

Major Issue #10 - Suit Approval

Subparts H, J, K, L, M, and N

Major Issue #11 - Restriction of Supplied Air Approval

Subpart J - 11.110 (a) (1) and 11.110 (a) (2)

Major Issue #12 - Reduction of Service Life

Subpart I - 11.102-5 (Revise Tables 5, 6 and 7)

Major Issue #13 - Powered Air

Subpart K - 11.140-3
Subpart L - 11.162
Subpart M - 11.183
Subpart N - 11.204

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SECTIONS IN 30 CFR PART 11 THAT ARE APPLICABLE TO ISEA'S RECOMMENDATIONS UNDER
"MAJOR ISSUES" AND WHICH REQUIRE REVISION TO CONFORM TO OUR RECOMMENDATIONS

ADMINISTRATIVE

Major Issue #1 - Proposed Test Procedures

Subpart G - 11.60 (b)
Subpart I - 11.90 (c)
Subpart L - 11.150 (NOTE)

Major Issue #2 - Appeals Procedure

Add to Subpart D

Major Issue #3 - SI Units

Subparts H through N