The NADA was approved in conjunction with publication of a new food additive regulation, § 121.297 *Ferrous fumarate* (21 CFR 121.297, subsequently recodified as § 558.258) in the FEDERAL REGISTER of February 14, 1967 (32 FR 2846). The regulation was issued in response to NADA 31-876 and food additive petition 5D1685 filed by Nixon & Co., Omaha, NE 68131, since renamed ConAgra, Inc. Accordingly, the new animal drug regulations are being amended to revoke § 558.258.

Therefore, under the Federal Food, Drug, and Cosmetic Act (sec. 512(i), 82 Stat. 347 (21 U.S.C. 360b(i))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.1), and redelegated to the Director of the Bureau of Veterinary Medicine (21 CFR 5.84), Part 558 is amended by revoking § 558.258 *Ferrous fumarate.*

Effective date. This regulation is effective November 28, 1978.

(Sec. 512(i), 82 Stat. 347 (21 U.S.C. 360(i)).)

Dated: November 17, 1978.

LESTER M. CRAWFORD,
Acting Director,
Bureau of Veterinary Medicine.

[FR Doc. 78-33134 Filed 11-27-78; 8:45 am]

[41-1003-M]

SUBCHAPTER J—RADIOLOGICAL HEALTH

[Docket No. 77N-0074]

PART 1040—PERFORMANCE STANDARDS FOR LIGHT-EMITTING PRODUCTS

Laser Products

AGENCY: Food and Drug Administration.

ACTION: Final rule.

SUMMARY: This rule amends the laser products performance standard to remove unneeded criteria for determining human access to laser or collateral radiation; specify more appropriate parameters for measuring the accessible emission levels of laser and collateral radiation, including scanned laser radiation; relax the accessible emission limits for collateral radiation in the wavelength range of greater than 400 nanometers (nm); relax the labeling and performance requirements for some Class II laser products; and allow more administrative flexibility in determining the wording of warning labels.

DATES: Effective December 8, 1978, except for § 1040.10(h)(2) (i) and (ii) which will be effective January 29, 1979, for laser products that are manufactured on or after these dates; comments by January 29, 1979.

ADDRESS: Written comments to the Hearing Clerk (HFA-305), Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville, Md. 20857.

FOR FURTHER INFORMATION CONTACT:

Glenn E. Conklin, Bureau of Radiological Health (HFX-460), Food and Drug Administration, Department of Health, Education, and Welfare, 5600 Fishers Lane, Rockville, Md. 20857, 301-443-3426.

SUPPLEMENTARY INFORMATION: The Commissioner of Food and Drugs issued a notice of intent, published in the FEDERAL REGISTER of April 1, 1977 (42 FR 17495), to amend the performance standard for laser products (§ 1040.10 (21 CFR 1040.10)). That notice described the amendments being considered as a result of experience gained in administering the performance standard. Interested persons were invited to submit written data, views, or arguments concerning those amendments and any associated potential environmental and economic impact. A draft of the amendments was distributed widely to manufacturers, professional associations, consumer groups, government agencies, and individuals who had requested information about laser products from the Bureau of Radiological Health of the Food and Drug Administration (FDA). Subsequently, the draft amendments and the basic concepts for them were discussed publicly at the May 5, 1977 meeting of the Technical Electronic Product Radiation Safety Standards Committee. Under the Radiation Control for Health and Safety Act of 1968, this statutory committee must be consulted prior to the establishment of any electronic product performance standard. The Committee and others generally supported the concepts involved in the amendments and suggested revisions to eliminate possible ambiguities.

The Commissioner therefore finds that further notice and public procedure on these amendments are unnecessary, and that more than adequate notice and opportunity for comment have already been provided.

EFFECTIVE DATE

These amendments would reduce the burden on affected manufacturers and the cost to the consumers without compromising the public health and safety. Also, no manufacturer with a currently compliant product would need to redesign his or her products in order to comply with the proposed amendments, and there would be greater design latitude within each of the graded risk classes for laser products. Therefore, it has been determined that pre-effectiveness delay concerning these amendments is unnecessary and would be contrary to the public interest by delaying realization of the cost savings that are anticipated to result from their implementation.

The Commissioner concludes, therefore, that good cause exists and that the public interest would best be served by making this amendment to the performance standard effective December 8, 1978, except for § 1040.10(h)(2) (i) and (ii) which will be effective January 29, 1979; the purchasing and servicing information specified in § 1040.10(h)(2) pertaining to Class IIa laser products will need to be printed.

At the same time, the Commissioner invites and encourages public comment on this action. Interested persons may on or before Janaury 29, 1979, file with the Hearing Clerk (HFA-305), Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville, Md. 20857, four copies of written comments on this amendment, identified with the docket number found in brackets in the heading of this document. Comments received may be seen in the office of the Hearing Clerk between 9 a.m. and 4 p.m., Monday through Friday. Any changes in this regulation justified by the comments will be the subject of a further amendment.

HUMAN ACCESS

As indicated in the April 1, 1977 notice, the Commissioner has reviewed the criteria of § 1040.10 for determining human access to laser and collateral radiation and has concluded that some of these criteria can be eliminated without affecting the protection afforded the public by the standard.

The current definition of "human access" in § 1040.10(b)(12) involves the concepts of access to laser or collateral radiation at a point by any part of the human body, by a straight line having an unobstructed length of 100 centimeters (cm), or by any line having an unobstructed length of 10 cm. The reference to a 10-cm line was included in the original definition to account for the possible insertion of flexible optical fibers, mirrors, or similar materials into a laser product. However, the Commissioner has concluded that the additional degree of safety provided by this requirement does not justify the added design difficulty that it poses. The Commissioner also finds the definition of "human access" overly restrictive when the criterion involving a 100-cm straight line is applied to collateral radiation. Collateral radiation arises from other than point sources and is difficult to collect and to focus into a diffraction-limited spot. Therefore, the Commissioner has revised the definition for "human access" to clarify the definition and to

delete (1) any reference to a 10-cm line and (2) reference to a 100-cm line for collateral radiation. The revised definition now clearly states that human access means access at a particular point to laser or collateral radiation by any part of the human body or access to laser radiation (but not collateral radiation) by a straight unobstructed path of up to 100 cm from any part of the body, including the eye.

The Commissioner notes that, after reviewing the draft amendments and in response to the April 1, 1977 notice, several persons, including members of the Technical Electronic Product Radiation Safety Standards Committee, suggested that the definition of "human access" should specify a minimum diameter for the 100-cm straight line.

The Commissioner disagrees with this suggestion and notes that a test object of specified diameter was included in the performance standard for microwave ovens in § 1030.10 (21 CFR 1030.10) and was found unsatisfactory as a concealed safety interlock criterion. Products could be designed to meet the literal requirements of this criterion, although many common household objects could be used to circumvent its intent (see 40 FR 27038 (June 26, 1975) and 40 FR 52007 (Nov. 7, 1975)). The new definition for human access and the acceptance angle and collimating optics (discussed later in this preamble) will enable manufacturers to design a more open protective housing using perforated or grille panels for their products, as long as the design does not permit any unobstructed straight-line path of less than 100 cm through the protective housing to the laser radiation. The Commissioner concludes that specifying a minimum diameter for the line would defeat the benefits of the new definition without any apparent increase in protection of the public health.

Other portions of § 1040.10 have been revised to clarify concepts of human access. The definition of "accessible emission level" in § 1040.10(b)(1) has been changed to express more clearly that the term refers to the magnitude of the radiation at a particular point. Section 1040.10(f)(3) concerning the remote control connector has been clarified by substituting "available" for "accessible." For consistency, "human" has been added to § 1040.10(h)(2)(ii) so that the requirement reads, in part, "displaceable portions of the protective housing that could allow human access to laser or collateral radiation."

The experience of FDA is that the beam attenuator specified in § 1040.10(f)(6) is used only with laser products for which access to laser and collateral radiation during operation is necessary to perform the product's function, and that the criteria of § 1040.10(b)(12) for determining human access to the radiation are not appropriate. Thus, the Commissioner is amending § 1040.10(f)(6) to specify that the beam attenuator, when in use, shall simply prevent access to radiation by any part of the human body. The emission indicator and aperture label would still indicate the possible presence of the laser radiation.

A comment made by some members of the Technical Electronic Product Radiation Safety Standards Committee indicated the term "viewable" in § 1040.10(f)(8) was not clear.

The Commissioner agrees with this comment, and the viewing optic requirement in § 1040.10(f)(8) has been restated to include the specific concept of accessibility of laser and collateral radiation to the human eye only by means of viewing optics, viewports, or display screens, rather than the generalized concept of accessible radiation; access of the human eye to laser or collateral radiation is the key issue.

Acceptance Angle and Collimating Optics for Measurements

The accessible emission limits for laser products, expressed in terms of irradiance, radiant energy, or radiant power, are based in part on collimated laser and collateral radiation that can be collected in an optical system having a small angle of acceptance and can be made equivalent to a narrower beam of radiation. The Commissioner concludes that the performance standard is overly restrictive with regard to multiple, extended, and divergent sources of radiation, and that different parameters for measuring the accessible emission levels of laser and collateral radiation need to be specified. Therefore, the Commissioner is amending § 1040.10(b)(18), (e)(3), and (e)(4) to include the concepts of the acceptance angle and collimating optics. By this change the standard will be more appropriate for multiple, extended, and divergent sources of radiation that do not present the same hazard as virtual point sources capable of producing highly collimated beams. The Commissioner is not amending that part of § 1040.10(e)(3)(ii) relating to the measurement of radiant exposure because these measurements of accessible laser radiation are needed only to determine if the upper limits of Class III, as specified in Table I–C of § 1040.10(d), are exceeded and these levels of laser radiation are both eye and skin hazards even upon diffuse reflection.

The Commissioner adds that, except for radiance measurements, the acceptance angle for the measurement of the other radiometric quantities is not specified directly in the standard. An acceptance angle of 2 pi steradians, established as part of the tests for determining compliance, is however based upon the criteria in § 1040.10(e)(2) and considers the maximum collectible radiation. This regulatory interpretation was necessary to account for the most hazardous situation, but may be unnecessarily restrictive with regard to multiple, extended, and divergent sources, when the question to be considered is how well collimated the laser and collateral radiation must be to be collected and focused on a small area of the skin, cornea, or retina.

One comment in response to the April 1977 notice suggested the introduction of a variable acceptance angle to match the dual accessible emission limits specified in § 1040.10(d)(4) to determine if laser or collateral radiation exceeds the limits of Class I. The comment recommended that magnitudes of the limiting angular subtense (α(min)) in the American National Standard Z136.1-1976 be used for the acceptance angle.

The Commissioner rejects the comment and maintains that using a varible acceptance angle for the instrumentation would unnecessarily complicate the measurements needed to determine a product's compliance with the standard. Further, the Commissioner intended the integrated radiance alternative of the dual limits included in § 1040.10(d)(4) to accommodate extended sources (real or virtual) such as holographic images, diffuse reflections, transmissions through diffusers, or diffuse collateral radiation, and notes that the dual limits of Class I are exceeded only if the limits for radiant energy and integrated radiance are exceeded; consequently, the dual limits of Class I are less restrictive than if a variable acceptance angle were used.

The standard in § 1040.10(d)(4) establishes limits for Class I from two perspectives. One limit, expressed as integrated radiance, pertains to the accessible emission level measured as a function of the brightness of the source; the other relates to the accessible emission level measured as the radiant energy incident upon the detector. The largest acceptance angle derived from these accessible emission limits for radiant energy measurements is 5×10^{-4} steradian, using a 7-millimeter (mm) diameter aperture stop. A somewhat larger solid angle of acceptance of 1×10^{-3} steradian provides more safety and is equivalent to a circular cone of acceptance of approximately 2 degrees diameter. Therefore the standard is being amended in § 1040.10(e)(3) and (e)(4), where appropriate, to require a specific acceptance angle of 1×10^{-3} steradian when determining the accessible

emission levels of laser and collateral radiation.

The Commissioner has determined that § 1040.10(e) is ambiguous as to the minimum size of a source of laser or collateral radiation that must be considered when measuring the radiance or integrated radiance because a source may be small or have a nonuniform spatial distribution. The size of the source to be considered depends upon the distance of the detector from the product. The closest approach of a person's eye to a point source of light at which a sharply focused retinal image is still produced is called the distance of maximum accommodation; moving closer to the point source would cause the spot formed on the retina to enlarge and the image to blur. According to published research, 20 cm is the average distance of maximum accommodation expected for 37-year old humans; older persons are expected to have a greater accommodation distance and younger persons a lesser distance (Ref. 1). A power of 5 diopters (the focusing power of a lens, expressed in diopters, is the reciprocal of the focal length, expressed in meters) for the collimating optics represents a 20-cm minimum focal distance. Utilizing the collimating optics of 5 diopters or less means that the source area of approximately 0.7 mm or larger in diameter that results in the maximum level will be considered in determining the accessible emission level in terms of radiance. Therefore, the standard is being amended to require collimating optics of 5 diopters or less as an additional measurement parameter to be used in conjunction with the aperture stops in the tests for determining compliance.

The Commissioner also recognizes that the combination of collimating optics and aperture stop establishes a collection angle for the aperture stop for divergent radiation emitted by a point source. The collection angle is twice that angle whose tangent is the ratio of the aperture stop radius to the distance of the aperture stop from point of emission of radiation on the product. In most instances this distance will be the focal distance of the collimating optics, modified by the acceptance angle of the aperture stop to maximize the collection of accessible radiation. The maximum collection angle is about 22 degrees for the 80-mm diameter aperture stop and about 2 degrees for the 7-mm diameter aperture stop.

The concepts of the acceptance angle of 1×10^{-3} steradian and the collimating optics of 5 diopters have been developed using information applicable primarily to the visible spectrum; however, the original intent of the agency is retained when these concepts are utilized in the ultraviolet and infrared spectral regions. Simple focusing optics are available that will concentrate well collimated radiation in these spectral regions.

Radiation Intended To Be Viewed

Laser products have accessible laser and collateral radiation that may be grouped into two categories: (1) radiation that is intended to be viewed directly and frequently, though not exclusively, by way of display screens, viewports, or microscopes when such viewing is necessary to achieve the intended function of the product; and (2) radiation that is not likely to be viewed for extended periods of time, either because use of the product would not require operators and others to view the radiation to perform the functions of the product or because no characteristics of the radiation would attract a person's gaze for long periods. The Commissioner believes the second category can be incorporated into the standard for appropriate types of laser products.

Accessible laser radiation of Class III is at levels at which biological damage to human tissue is possible from acute direct exposure. Similarly, accessible laser radiation of Class IV is at levels at which biological damage is possible from acute direct or diffuse exposure. Thus, the requirements relating to Class III and IV cannot be relaxed on the above basis. By contrast, Class II accessible laser radiation is at levels of visible radiation at which eye damage from chronic exposure is possible. However, Class II laser radiation is bright and can be uncomfortable to view, especially the higher levels of Class II. The Commissioner believes a person would not view such a light source for more than 1×10^3 seconds (16.7 minutes), unless there were some compelling reason. Chance viewing of Class II levels of laser radiation that do not exceed the accessible emission limits of Class I for any emission duration less than or equal to 1×10^3 seconds is not expected to be hazardous.

Therefore, the Commissioner is amending the standard to add a new subclass for laser products, Class IIa, and to amend § 1040.10 (f)(5), (f)(6), (g)(1), and (g)(4) to provide for special considerations within Class IIa. Class IIa products are exempted from the requirements for a laser radiation emission indicator, beam attenuator, Class II warning logotype, and aperture label. As amended, the standard requires Class IIa laser products to bear a class designation label with instructions to avoid long-term viewing of the direct laser radiation. The class designation label, because it does carry a warning statement to the operator of the Class IIa product, must be visible during operation as required by § 1040.10(g)(10) and must be reproduced in purchasing and servicing information as required by § 1040.10(h)(2)(i).

Also, the Commissioner is extending this concept to collateral radiation by amending the standard to increase the long-term level of collateral radiation permitted by reducing the applicable maximum emission duration used in determining the accessible emission level (Table III of § 1040.10(d)). This change for radiation in the wavelength range of greater than 400 nm but less than 13,000 nm decreases the maximum emission duration from 1×10^4 seconds to 1×10^3 seconds, but does not apply either to radiation that is accessible to the human eye by means of viewing optics, viewports, or display screens (§ 1040.10(f)(8)), or to ultraviolet collateral radiation because a cumulative damage mechanism is likely.

Emission Indicators and Collateral Radiation

Some members of the Technical Electronic Products Radiation Safety Standards Committee have commented extensively in their last two meetings concerning the provisions of the laser standard and the agency's policy with respect to the light emitted from the pilot light on laser products.

The standard requires in § 1040.10(f)(5) that each laser product of Class II or greater incorporate an emission indicator. Nowhere does the standard require that the emission indicator be a pilot light, although manufacturers have found a pilot light a convenient means for satisfying the requirements of § 1040.10(f)(5). The Commissioner believes that the radiation from laser product pilot lights should not be considered collateral radiation because, to be collateral radiation, such radiation must be emitted by a laser product as a result of the operation of the laser(s) or be emitted by any component that is physically necessary for the operation of the laser(s) incorporated into that product. Collateral radiation includes, for example, light from the laser-tube plasma glow, light from the flashlamp for exciting the laser medium, and x-radiation from the laser energy source (components that are physically necessary for the operation of the laser). Collateral radiation does not include emissions from a pilot light because it is not physically necessary to the operation of the laser. The Commissioner concludes that the definition for collateral radiation needs clarification and amends § 1040.10(b)(9) accordingly.

Measurement Parameter for Scanned Laser Radiation

A comment received before the effective date of the standard, August 2,

1976, suggested that in some cases, high levels of accessible scanned laser radiation could be reduced below the Class I limits by varying the apparent origin from which the scanned pattern is emitted. This type of radiation source can be regarded as an apparent extended source.

The Commissioner believes the standard should provide for the apparent extended sources of laser radiation. The standard currently provides in § 1040.10(e)(4) that the accessible emission levels of scanned laser radiation shall be determined by the measurement of radiation detectable within a stationary circular aperture stop having a 7-mm diameter. The resulting temporal variation of detected radiation is considered as a pulse or series of pulses. Under § 1040.10(e)(3)(iii), measuring integrated radiance involves a solid angle of acceptance of 1×10^{-5} steradian. However, under § 1040.10(e)(2)(iv) the acceptance angle of the instrument for measuring integrated radiance must be instantaneously so positioned and so oriented with respect to the laser product "as to result in the maximum detection of radiation by the instrument." Conceptually the orientation of the instrument must track the source, but its aperture stop remains stationary. As noted in § 1040.10(e)(3), techniques, including computations, that provide results equivalent to the above are permitted.

Apparent extended sources formed by a moving, well collimated, laser beam can be more hazardous than conventional extended sources. The eye can follow and fix upon a slowly moving source of visible light, but the source can also move so rapidly (e.g., a television image formed by a rapidly scanning electron beam) that the eye cannot follow. The human eye has difficulty tracking an angular motion of 2 radians/second or greater (Refs. 2 and 3.) An effective extended source is achieved when the angular motion of the source transversely to the line of sight of the eye is 5 radians/second or greater. Therefore, the Commissioner is amending § 1040.10(e)(4) to provide that the solid angles of acceptance utilized in the measurement of radiant energy and radiance need not track the source at an angular speed greater than 5 radians/second to maximize the measurement of radiation.

Change in Wavelength Range for Visible Radiation

The introduction of Class IIa into the standard results in anomalies in the classification of certain products that emit accessible laser radiation between 700 nm and 711 nm and at radiant exposure values below the accessible emission limits of Class IIa at 700 nm. For example, a 1-microwatt laser product would be classified in Class IIa if emission were at 699 nm, Class III if emission were at 701 nm, and Class I at 711 nm. However, the original rationale for Class II remains valid because the relative spectral luminous efficiency value, a measure of relative photochemical response of the eye at 710 nm, is still half the value at 700 nanometers (Ref. 4).

Thus, the Commissioner is changing the Class II and Class IIa wavelength boundary to 710 nm where the Class IIa accessible emission limit curve intercepts that for Class I, and all portions of the standard that contain the wavelength 700 nanometers have been revised accordingly.

Flexibility in Labeling

Wording of the warning statements specified in § 1040.10(g) has been found on occasion to be inappropriate. Problems in which the size, configuration, or design of the laser product precludes compliance with the label requirements have been readily resolved using the mechanism established in § 1040.10(g)(10); without this mechanism, the lengthy variance procedure of § 1010.4 would have to be used. The Commissioner concludes that similar provisions are appropriate for wording and is amending § 1040.10(g)(10) to permit the Director, Bureau of Radiological Health, on his own initiative or upon written application by the manufacturer, to approve the use of alternate wording on warning labels when the wording prescribed by the standard is inappropriate or would be ineffective because of the size, configuration, design, or function of the laser product.

The warning required by § 1040.10(g)(8) for invisible radiation is amended to permit use of the words "visible and/or invisible" whenever the product may emit any combination of visible and invisible radiation.

References

1. Davson, Hugh, "The Physiology of the Eye," 3d ed., Academic Press, New York, pp. 402-403, 1972.

2. Barmack, M., "Dynamic Visual Acuity as an Index of Eye Movement Control," *Vision Research*, 10:1377-1391, 1970.

3. Brown, B., "Dynamic Visual Acuity, Eye Movements, and Peripheral Acuity for Moving Targets," *Vision Research*, 12:305-321, 1972.

4. RCA Electro-Optics Handbook, 1974.

Pertinent background data and information supporting the Commissioner's action are available for public review in the office of the Hearing Clerk (HFA-305), Food and Drug Administration.

On the basis of an amendment to the environmental impact analysis report for the performance standard for laser products, the Commissioner concludes that promulation of this amendment to the standard will not significantly affect the quality of the human environment and, therefore, that no environmental impact statement is necessary under § 25.1(b) (21 CFR 25.1(b)). A copy of the FDA environmental impact assessment is on file with the Hearing Clerk, Food and Drug Administration.

Therefore, under the Public Health Service Act, as amended by the Radiation Control for Health and Safety Act of 1968 (sec. 358, 82 Stat. 1177-1179 (42 U.S.C. 263f)) and under authority delegated to the Commissioner (21 CFR 5.1), Part 1040 is amended as follows:

1. In § 1040.10, by revising paragraph (b) (1), (6)(i), (9), (12), and (18); the wavelength column in Table I-B and item 1 of Table III in paragraph (d); paragraph (e)(3)(i), (ii), and (iii) and (4); paragraph (f)(3), (5)(i), (6), and (8); paragraph (g)(1), (2)(i), the introductory text of (4), (6)(i)(*a*), (ii)(*b*), and (iii)(*b*), (7)(i)(*a*), (ii)(*b*), and (iii)(*b*), (8)(i) and (ii), and (10); and paragraph (h)(2)(i) and (ii) to read as follows:

§ 1040.10 Laser Products.

* * * * *

(b) * * *

(1) "Accessible emission level" means the magnitude of accessible laser or collateral radiation of a specific wavelength and emission duration at a particular point as measured according to paragraph (e) of this section. Accessible laser or collateral radiation is radiation to which human access is possible, as defined in paragraph (b)(9), (12), and (18) of this section.

* * * * *

(6) * * *

(i) Permits human access to laser radiation in excess of the accessible emission limits of Class I, but not in excess of the accessible emission limits of Class II in the wavelength range of greater than 400 nanometers (nm), but less than or equal to 710 nanometers for emission durations greater than 0.25 second; and

* * * * *

(9) "Collateral radiation" means any electronic product radiation, except laser radiation, emitted by a laser product as a result of the operation of the laser(s) or any component of the laser product that is physically necessary for the operation of the laser(s).

* * * * *

(12) "Human access" means access at a particular point to:

(i) Laser or collateral radiation by any part of the human body, or

(ii) Laser radiation by a straight unobstructed path of up to 100 centimeters from any part of the human body.

* * * * *

(18) "Laser radiation" means all electromagnetic radiation emitted by a laser product within the spectral range specified in paragraph (b)(15) of this section that is produced as a result of controlled stimulated emission or that is detectable with radiation so produced through the appropriate aperture stop and within the appropriate solid angle of acceptance, as specified in paragraph (e) of this section.

* * * * *

(d) * * *

TABLE I–B

CLASS II ACCESSIBLE EMISSION LIMITS FOR LASER RADIATION

Wavelength (nanometers)	Emission duration (seconds)	Class II – Accessible emission limits
>400 but ≤ 710	$>2.5 \times 10^{-1}$	$1.0 \times 10^{-3} k_1 k_2 t$ J

* * * * *

TABLE III—ACCESSIBLE EMISSION LIMITS FOR COLLATERAL RADIATION FROM LASER PRODUCTS

1. *Accessible emission limits* for collateral radiation having wavelengths greater than 250 nanometers but less than or equal to 13,000 nanometers are identical to the accessible emission limits of Class I laser radiation, as determined from Tables I-A and II-A in this paragraph:

i. In the wavelength range of less than or equal to 400 nanometers, for all emission durations;

ii. In the wavelength range of greater than 400 nanometers, for all emission durations less than or equal to 1×10^3 seconds and, when applicable under paragraph (f)(8) of this section, for all emission durations.

* * * * *

(e) * * *

(3) * * *

(i) The radiant power (W) or radiant energy (J) detectable through a circular aperture stop having a diameter of 80 millimeters (except for scanned laser radiation) and within a circular solid angle of acceptance of 1×10^{-3} steradian with collimating optics of 5 diopters or less.

(ii) The irradiance (W cm^{-2}) or radiant exposure (J cm^{-2}) equivalent to the radiant power (W) or radiant energy (J) detectable through a circular aperture stop having a diameter of 7 millimeters and, for irradiance, within a circular solid angle of acceptance of 1×10 cm^{-3} steradian with collimating optics of 5 diopters or less, divided by the area of the aperture stop (cm^{-2}).

(iii) The radiance (W cm^{-2} sr^{-1}) or integrated radiance (J cm^{-2} sr^{-1}) equivalent to the radiant power (W) or radiant energy (J) detectable through a circular aperture stop having a diameter of 7 millimeters and within a circular solid angle of acceptance of 1×10^{-5} steradian with collimating optics of 5 diopters or less, divided by that solid angle (sr) and by the area of the aperture stop (cm^2).

(4) *Measurement parameters for scanned laser radiation.* Accessible emission levels of scanned laser radiation shall be based upon the measurement of radiation detectable through a stationary circular aperture stop having a 7-millimeter diameter and within the circular solid angle of acceptance with collimating optics applicable under paragraph (e)(3) of this section, or the equivalent. The direction of the solid angle of acceptance shall change as needed to maximize detectable radiation, with an angular speed of up to 5 radians/second.

(f) * * *

(3) *Remote control connector.* Each laser system classified as a Class III or IV laser product shall incorporate a readily available remote control connector having an electrical potential difference of no greater than 130 root-mean-square volts between the terminals of the remote control connector. When the terminals of the connector are not electrically joined, human access to all laser and collateral radiation from the laser product in excess of the accessible emission limits of Class I and Table III of paragraph (d) of this section shall be prevented.

* * * * *

(5) * * *

(i) Each laser system classified as a Class II laser product, except Class II laser products that do not exceed the accessible emission limits of Class I for any emission duration less than or equal to 1×10^{-3} seconds, shall incorporate an emission indicator that provides a visible or audible signal during emission of accessible laser radiation in excess of the accessible emission limits of Class I.

* * * * *

(6) *Beam attenuator.* Each laser system classified as a Class II, III, or IV laser product, except Class II laser products that do not exceed the accessible emission limits of Class I for any emission duration less than or equal to 1×10^3 seconds, shall be provided with one or more permanently attached means, other than laser energy source switch(es), electrical supply main connectors, or the key-actuated master control, capable of preventing access by any part of the human body to all laser and collateral radiation in excess of the accessible emission limits of Class I and Table III.

* * * * *

(8) *Viewing optics.* All viewing optics, viewports, and display screens incorporated into a laser product, regardless of its class, shall at all times limit the levels of laser and collateral radiation accessible to the human eye by means of such viewing optics, viewports, or display screens to less than the accessible emission limits of Class I and Table III of paragraph (d) of this section. For any shutter or variable attenuator incorporated into such viewing optics, viewports, or display screens, a means shall be provided:

(i) To prevent access by the human eye to laser and collateral radiation in excess of the accessible emission limits of Class I and Table III of paragraph (d) of this section whenever the shutter is opened or the attenuator varied.

(ii) To preclude, upon failure of such means as required in paragraph (f)(8)(i) of this section, opening the shutter or varying the attenuator when access by the human eye is possible to laser or collateral radiation in excess of the accessible emission limits

of Class I and Table III of paragraph (d) of this section.

* * * * *

(g) * * *

(1) *Class II designation and warning.* (i) Each Class II laser product which does not exceed the accessible emission limits of Class I for any emission duration less than or equal to 1×10^{3} seconds, shall have affixed a label bearing the following wording: "Class IIa Laser Product—Avoid Long-Term Viewing of Direct Laser Radiation."

(ii) Each Class II laser product other than those described in paragraph (g)(1)(i) of this section shall have affixed a label bearing the warning logotype A (Figure 1 in this paragraph) and including the following wording:

[Position 1 on the logotype]

"LASER RADIATION—DO NOT STARE INTO BEAM"; and

[Position 3 on the logotype]

"CLASS II LASER PRODUCT".

* * * * *

(2) *Class III designation and warning.* (i) Each laser product classified in Class III solely because of the emission of accessible laser radiation for emission durations greater than 3.8×10^{-4} second and in the wavelength range of greater than 400 nanometers but less than or equal to 710 nanometers with an irradiance of less than or equal to 2.5×10^{-3} W cm^{-2} and with a radiant power of less than or equal to 5.0×10^{-3} W shall have affixed a label bearing the warning logotype A (Figure 1 of paragraph (g)(1) of this section) and including the following wording:

[Position 1 on the logotype]

"LASER RADIATION—DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS"; and,

[Position 3 on the logotype]

"CLASS IIIa LASER PRODUCT".

* * * * *

(4) *Aperture label.* Each laser product, except medical laser products and Class II laser products that do not exceed the accessible emission limits of Class I for any emission duration less than or equal to 1×10^{-3} seconds, shall have affixed, in close proximity to each aperture through which is emitted accessible laser or collateral radiation in excess of the accessible emission limits of Class I and Table III of paragraph (d) of this section, a label(s) bearing the following wording as applicable:

* * * * *

(6) * * *

(i) * * *

(*a*) In excess of the accessible emission limits of Class I for emission durations greater than 0.25 second and in the wavelength range greater than 400 nanometers but less than or equal to 710 nanometers; and,

* * * * *

(ii) * * *

(*b*) In excess of either an irradiance of 2.5×10^{-3} W cm^{-2} or a radiant power of 5.0×10^{-3} W for emission durations greater than 3.8×10^{-4} second for wavelengths greater than 400 nanometers but less than or equal to 710 nanometers; and,

* * * * *

(iii) * * *

(*b*) In excess of either an irradiance of 2.5×10^{-3} W cm^{-2} or a radiant power of 5.0×10^{-3} W for emission durations greater than 3.8×10^{-4} second for wavelengths greater than 400 nanometers but less than or equal to 710 nanometers; or,

* * * * *

(7) * * *

(i) * * *

(*a*) In excess of the accessible emission limits of Class I for emission durations greater than 0.25 second and in the wavelength range greater than 400 nanometers by less than or equal to 710 nanometers; and,

* * * * *

(ii) * * *

(*b*) In excess of neither an irradiance of 2.5×10^{-3} W cm^{-2} nor a radiant power of 5.0×10^{-3} W for emission durations greater than 3.8×10^{-4} second for wavelengths greater than 400 nanometers but less than or equal to 710 nanometers; and,

* * * * *

(iii) * * *

(*b*) In excess of either an irradiance of 2.5×10^{-3} W cm^{-2} or a radiant power of 5.0×10^{-3} W for emission durations greater than 3.8×10^{-4} second for wavelengths greater than 400 nanometers but less than or equal to 710 nanometers; or,

* * * * *

(8) * * *

(i) Less than or equal to 400 nanometers or greater than 710 nanometers, the word "invisible" shall appropriately precede the word "radiation"; or,

(ii) In a range specified in paragraph (g)(8)(i) of this section and also within the range of greater than 400 nanometers but less than or equal to 710 nanometers, the words "visible and invisible" or "visible and/or invisible" shall appropriately precede the word "radiation."

* * * * *

(10) *Label specifications.* Labels required by this section and § 1040.11 shall be permanently affixed to, or inscribed on, the laser product, legible, and clearly visible during operation, maintenance, or service, as appropriate. If the size, configuration, design, or function of the laser product would preclude compliance with the requirements for any required label or would render the required wording of such label inappropriate or ineffective, the Director, Bureau of Radiological Health, on the Director's own initiative or upon written application by the manufacturer, may approve alternate means of providing such label(s) or alternate wording for such label(s) as applicable.

(h) * * *

(2) * * *

(i) In all catalogs, specification sheets, and descriptive brochures pertaining to each laser product, a legible reproduction (color optional) of the class designation and warning required by paragraph (g) of this section to be affixed to that product, including the information required for positions 1, 2, and 3 of the applicable logotype (Figure 1 or 2 of paragraph (g)(1) and (2)(ii) of this section).

(ii) To servicing dealers and distributors and to others upon request at a cost not to exceed the cost of preparation and distribution, adequate instructions for service adjustments and service procedures for each laser product model, including clear warnings and precautions to be taken to avoid possible exposure to laser and collateral radiation in excess of the accessible emission limits in Tables I-A, I-B, I-C and III of paragraph (d) of this section, and a schedule of maintenance necessary to keep the product in compliance with this section and § 1040.11; and, in all such service instructions, a listing of those controls and procedures that could be utilized by persons other than the manufacturer or his agents to increase accessible emission levels of radiation and a clear description of the location of displaceable portions of the protective housing that could allow human access to laser or collateral radiation in excess of the accessible emission limits in Tables I-A, I-B, I-C, and III of paragraph (d) of this section. The instructions shall include protective

procedures for service personnel, and legible reproductions (color optional) of required labels and hazard warnings.

* * * * *

2. In § 1040.11, by revising paragraph (b)(1) to read as follows:

§ 1040.11 Specific purpose laser products.

* * * * *

(b) * * *

(1) Shall not permit human access to laser radiation in the wavelength range of greater than 400 nanometers but less than or equal to 710 nanometers with a radiant power that exceeds 5.0×10^{-3} W for any emission duration greater than 3.8×10^{-4} second; and,

* * * * *

Effective date. This regulation shall be effective December 8, 1978, except for § 1040.10(h)(2) (i) and (ii) which will be effective January 29, 1979.

(Sec. 358, 82 Stat. 1177-1179 (42 U.S.C. 263f).)

Dated: November 17, 1978.

WILLIAM F. RANDOLPH,
Acting Associate Commissioner for Regulatory Affairs.

[FR Doc. 78-33137 Filed 11-27-78; 8:45 am]

[4710-08-M]

Title 22—Foreign Relations

CHAPTER I—DEPARTMENT OF STATE

[Dept. Reg. 108.762]

PART 3a—ACCEPTANCE OF EMPLOYMENT FROM FOREIGN GOVERNMENTS BY MEMBERS OF THE UNIFORMED SERVICES

Final Rule

AGENCY: Department of State.

ACTION: Final rule.

SUMMARY: This rule establishes regulations governing the procedures for approving civil employment by a foreign government of retired and reserve members of the uniformed services (Army, Navy, etc.) and commissioned Corps of the Public Health Service and the National Oceanic and Atmospheric Administration. The regulations implement section 509 of Pub. L. 95-105 (37 U.S.C. 801 note).

EFFECTIVE DATE: November 28, 1978.

FOR FURTHER INFORMATION CONTACT:

Capt. John E. Burgess, United States Navy, Office of International Security Operations, Bureau of Politico-Military Affairs, Department of State, Washington, D.C 20520, phone 202-632-8688.

SUPPLEMENTARY INFORMATION: A notice of proposed rulemaking was published in the FEDERAL REGISTER on May 31, 1978 (43 FR 23593) inviting interested persons to submit comments regarding the proposed regulations. No comments were received.

The title of the new Part 3a has been changed from "Acceptance of Employment from Foreign Governments by Retired and Reserve Officers" to "Acceptance of Employment from Foreign Governments by Members of the Uniformed Services." This change reflects more accurately and generally the category of persons to whom the regulation applies. In addition, the words "no authority", which were inadvertently omitted from the text of § 3a.2(b) in the notice of proposed rulemaking, have been added. With these exceptions, the text published in the notice of proposed rulemaking is adopted without change.

ADOPTION OF AMENDMENT

Chapter I of 22 CFR is amended by adding a new Part 3a as set forth below.

Dated: November 18, 1978.

WARREN CHRISTOPHER,
Deputy Secretary of State.

Sec.

AUTHORITY: Sec. 509, 91 Stat. 859 (37 U.S.C. 801 Note); Sec. 4, as amended, 63 Stat. 111 (22 U.S.C. 2658).

§ 3a.1 Definitions.

For purposes of this part—

(a) "Applicant" means any person who requests approval under this part to accept any civil employment (and compensation therefor) from a foreign government and who is: (1) Any retired member of the uniformed services;

(2) Any member of a Reserve component of the Armed Forces; or

(3) Any member of the commissioned Reserve Corps of the Public Health Service.

The term "applicant" also includes persons described in subparagraph (1), (2), or (3), who have already accepted foreign government employment and are requesting approval under this part to continue such employment.

(b) "Uniformed services" means the Armed Forces, the commissioned Regular and Reserve Corps of the Public Health Service, and the commissioned corps of the National Oceanic and Atmospheric Administration.

(c) "Armed Forces" means the Army, Navy, Air Force, Marine Corps, and Coast guard.

(d) "Secretary concerned" means: (1) The Secretary of the Army, with respect to retired members of the Army and members of the Army Reserve;

(2) The Secretary of the Navy, with respect to retired members of the Navy and the Marine Corps, members of the Navy and Marine Corps Reserves, and retired members of the Coast Guard and members of the Coast Guard Reserve when the Coast Guard is operating as a service in the Navy;

(3) The Secretary of the Air Force, with respect to retired members of the Air Force and members of the Air Force Reserve;

(4) The Secretary of Transportation, with respect to retired members of the Coast Guard and members of the Coast Guard Reserve when the Coast Guard is not operating as a service in the Navy;

(5) The Secretary of Commerce, with respect to retired members of the commissioned corps of the National Oceanic and Atmospheric Administration; and

(6) The Secretary of Health, Education, and Welfare, with respect to retired members of the commissioned Regular Corps of the Public Health Service and members of the commissioned Reserve Corps of the Public Health Service.

§ 3a.2 Requirement for approval of foreign government employment.

(a) The United States Constitution (Article I, Section 9, clause 8) prohibits the acceptance of civil employment with a foreign government by an officer of the United States without the consent of Congress. Congress has consented to the acceptance of civil employment (and compensation therefor) by any person described in § 3a.1(b) subject to the approval of the Secretary concerned and the Secretary of State (37 U.S.C. 801 Note). Civil employment with a foreign government may not be accepted without such approval by any person so described.

(b) The Secretary of State has no authority to approve employment with a foreign government by any officer of the United States other than a person described in § 3a.1(a). The acceptance of employment with a foreign government by any other officer of the United States remains subject

to the constitutional prohibition described in paragraph (a) of this section.

(c) Any person described in § 3a.1(a) who accepts employment with a foreign government without the approval required by this section or otherwise obtaining the consent of Congress is subject to forfeiture of retired pay to the extent of his or her compensation from the foreign government, according to the Comptroller General of the United States (44 Comp. Gen. 139 (1964)). This forfeiture is in addition to any other penalty which may be imposed under law or regulation.[1]

§ 3a.3 Authority to approve or disapprove proposed foreign government employment.

The Director, Bureau of Politico-Military Affairs, is authorized to approve or disapprove any request by an applicant for approval under this part to accept civil employment (and compensation therefor) from a foreign government. The Director may delegate this authority within the Bureau of Politico-Military Affairs, Department of State.

§ 3a.4 Procedure for requesting approval.

(a) An applicant must submit a request for approval of foreign government employment to the Secretary concerned, whose approval is also required by law for the applicant's acceptance of civil employment from a foreign government. The request must contain information concerning the applicant's status, the nature of the proposed employment in as much detail as possible, the identity of and relationship to the foreign government concerned, and other matters as may be required by the Secretary concerned.

(b) Requests approved by the Secretary concerned will be referred to the Director, Bureau of Politico-Military Affairs, for approval. Requests received by the Director, Bureau of Politico-Military Affairs, directly from an applicant will be initially forwarded to the Secretary concerned, or his designee, for approval of disapproval.

§ 3a.5 Basis for approval or disapproval.

Decisions by the Director, Bureau of Politico-Military Affairs, under this part shall be based on whether the applicant's proposed employment with a foreign government would adversely affect the foreign relations of the United States, in light of the applicant's official status as a retiree or reservist.

[1] Approval under this Part does not constitute an exception to the provisions of the Immigration and Nationality Act concerning loss of United States citizenship, for example, by becoming a citizen of or taking an oath of allegiance to another country. See 8 U.S.C. 1481 et seq.

§ 3a.6 Notification of approval.

The Director, Bureau of Politico-Military Affairs, will notify the Secretary concerned when an applicant's proposed foreign government employment is approved. Notification of approval to the applicant will be made by the Secretary concerned or his designee.

§ 3a.7 Notification of disapproval and reconsideration.

(a) The Director, Bureau of Politico-Military Affairs, will notify the applicant directly when an applicant's proposed foreign employment is disapproved, and will inform the Secretary concerned.

(b) Each notification of disapproval under this section must include a statement of the reasons for the disapproval, with as much specificity as security and foreign policy considerations permit, together with a notice of the applicant's right to seek reconsideration of the disapproval under paragraph (c) of this section.

(c) Within 60 days after receipt of the notice of disapproval, an applicant whose request has been disapproved may submit a request for reconsideration by the Director, Bureau of Politico-Military Affairs. A request for reconsideration should provide information relevant to the reasons set forth in the notice of disapproval.

(d) The disapproval of a request by the Director, Bureau of Politico-Military Affairs, will be final, unless a timely request for reconsideration is received. In the event of a request for reconsideration, the Director, Bureau of Politico-Military Affairs, will make a final decision after reviewing the record of the request. A final decision after reconsideration to approve the applicant's proposed employment with a foreign government will be communicated to the Secretary concerned as provided in § 3a.6. A final decision after reconsideration to disapprove the applicant's proposed employment with a foreign government will be communicated directly to the applicant as provided in paragraph (a) of this section and the Secretary concerned will be informed. The Director's authority to make a final decision after reconsideration may not be redelegated.

§ 3a.8 Change in status.

In the event that an applicant's foreign government employment approved under this part is to be materially changed, either by a substantial change in duties from those described in the request upon which the original approval was based, or by a change of employer, the applicant must obtain further approval in accordance with this part for such changed employment.

[FR Doc. 78-33341 Filed 11-27-78; 8:45 am]

[4410-01-M]

Title 28—Judicial Administration

CHAPTER I—DEPARTMENT OF JUSTICE

[Order No. 809-78]

PART 0—ORGANIZATION OF THE DEPARTMENT OF JUSTICE

Subpart M—Land and Natural Resources Division

ASSIGNMENT OF RESPONSIBILITY UNDER SECTION 201(f) OF THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: Section 201(f) of the Surface Mining Control and Reclamation Act of 1977, 91 Stat. 450, provides that no federal employee performing any function under the Act may hold any direct or indirect financial interest in surface or underground coal mining, and it directs the Secretary of the Interior to promulgate regulations enforcing it. Under regulations promulgated at 30 CFR Part 706, 42 FR 56060 (October 20, 1977), the head of each Executive Department performing any function under the Act is required to implement a system of disclosure of employee financial interests in cooperation with the Director, Office of Surface Mining Control and Reclamation, Department of the Interior. This order designates the Assistant Attorney General, Land and Natural Resources Division, to carry out the responsibilities of the Department of Justice under these regulations.

EFFECTIVE DATE: November 20, 1978.

FOR FURTHER INFORMATION CONTACT:

Lois J. Schiffer, Land and Natural Resources Division, Department of Justice, Washington, D.C. 20530, 202-633-2704.

By virtue of the authority vested in me by 5 U.S.C. 301 and 28 U.S.C. 509, 510, § 0.65 of Subpart M of Part 0 of Chapter I of Title 28, Code of Federal Regulations, is amended by adding a new paragraph (h) to read as follows:

§ 0.65 General functions.

* * * * *

(h) Performance of the Department's functions under § 706.5 of the

regulations for the prevention of conflict of interests promulgated by the Secretary of the Interior under the authority of the Surface Mining Control and Reclamation Act of 1977, section 201(f), 91 Stat. 450, and contained in 30 CFR Part 706.

Dated: November 20, 1978.

GRIFFIN B. BELL,
Attorney General.

[FR Doc. 78-33273 Filed 11-27-78; 8:45 am]

[4410-01-M]

[Order No. 810-78]

PART 0—ORGANIZATION OF THE DEPARTMENT OF JUSTICE

Subpart O—Office of Management and Finance

RESPONSIBILITY FOR AUDIOVISUAL ACTIVITIES

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: This order expressly assigns the Department-wide responsibility for the management of audiovisual programs to the Assistant Attorney General for Administration. His functions include the issuance of policies and procedures for audiovisual programs, the design of a recordkeeping and reporting system, and the approval or disapproval of production and equipment requests. The purpose of the order is to clarify the authority of the Assistant Attorney General for Administration to centralize audiovisual program management and to prevent duplication and waste.

EFFECTIVE DATE: November 20, 1978.

FOR FURTHER INFORMATION CONTACT:

Harry Fair, Acting Director, Administrative Programs Management Staff, Office of Management and Finance, Department of Justice, Washington, D.C. 20530, 202-633-2728.

By virtue of the authority vested in me by 28 U.S.C. 509, 510, and 5 U.S.C. 301, § 0.75(j) of Subpart O of Part 0 of Chapter I of Title 28, Code of Federal Regulations, is revised to read as follows:

§ 0.75 Policy functions.

* * * * *

(j) Plan, direct, and administer Department-wide policies, procedures, and regulations concerning records, reports, procurement, printing, graphics, audiovisual activities (including the approval or disapproval of production and equipment requests), forms management, supply management, motor vehicles, real and personal property, space assignment and utilization, and all other administrative services functions.

Dated: November 20, 1978.

GRIFFIN B. BELL,
Attorney General.

[FR Doc. 78-33274 Filed 11-27-78; 8:45 am]

[3510-16-M]

Title 37—Patents, Trademarks, and Copyrights

CHAPTER I—PATENT AND TRADEMARK OFFICE, DEPARTMENT OF COMMERCE

PART 4—FORMS FOR TRADEMARK CASES

AGENCY: Patent and Trademark Office, Commerce.

ACTION: Final rule.

SUMMARY: The Patent and Trademark Office adopts revisions to the suggested forms for use in trademark cases. These revisions are intended to improve suggested forms which had been found to be confusing or susceptible to misinterpretation and provide a new suggested form to eliminate the need for the user to combine two forms.

DATES: Effective date: January 1, 1979.

FOR FURTHER INFORMATION CONTACT:

Miss Katharine I. Hancock by telephone at (703) 557-5380, or by mail marked to her attention and addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

SUPPLEMENTARY INFORMATION: In the FEDERAL REGISTER of May 3, 1977 (42 FR 22378) there was published a Patent and Trademark Office proposal to revise certain existing forms and provide one new form for trademark cases. Comments were received from six persons. Two persons suggested that the the word "swears," proposed at the beginning of verifications and affidavits, was not appropriate and that language relating to oath should be confined to the jurat. This suggestion has been adopted. It was suggested by two persons that double signatures be eliminated from the forms for opposition and petition to cancel, and this suggestion has been adopted. Also, after further consideration with the object of eliminating confusion, inconsistency and error from the forms, some additional changes to forms set out in the proposal, and to forms 4.7, 4.9, 4.11 and 4.23 which were not included in the proposal, are being adopted.

Changes which have not been published for comment do not represent any change in practice but are editorial in nature and do not impose a burden on anyone; further opportunity for comment is therefore deemed not necessary.

The ways in which the changes being adopted vary from the published proposal are summarized as follows:

The words "hereby swears" proposed at the beginning of verifications and affidavits are replaced by the word "states." This change appears in forms 4.1, 4.5, 4.6, 4.13, 4.14, 4.15, 4.16, 4.16 (Combined 8 & 15), 4.17 and 4.18.

In forms 4.1, 4.1a 4.7, 4.8, 4.9 and 4.10, where goods or services are set forth, the terms "(Common, usual or ordinary name of (goods or services))" and "(Insert illustrative examples of the goods or services)" are deleted and the term "the following (goods or services):" is inserted instead, although the format of form 4.8 makes it necessary to use the variation "Name the goods or services."

In forms 4.1 and 4.1a, the term "trade style" is deleted and "business trade name" put in its place in indentifying an individual applicant in order to conform more closely to the language of the statute. The wording "including street, city and State" is deleted from the address lines. The same changes have been made, where appropriate, in forms 4.17 and 4.18.

In form 4.1a, last clause, the word "herein" is deleted as unclear; the word "further" and the last occurrence of the word "that" are deleted as unnecessary.

In form 4.5, "firm" is changed to "partnership" as a more definite term for the entity for which the form is designed; "member of firm" is changed to "partner;" and the wording "including street, city and State" in the address, as well as the wording and space for domicile, are deleted.

In form 4.6, the proposed change of the word "affidavit" to "application" in the verification is not adopted; instead, the word "affidavit" is changed to "instrument" because the paper being executed contains both an application and an affidavit (verification) and the term "instrument" will encompass both. The wording "including street, city and State" in the address is deleted.

In forms 4.8 and 4.10, footnote (5) is replaced by new footnote (16) in order to clarify instructions for setting forth the manner of use of the mark; as a result, present footnote numbers (16), (17) and (18) in companion forms 4.9 and 4.11 are changed to numbers (17), (18) and (19), respectively.

In form 4.8, last sentence, the words "declaration from form" are inserted