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materials of which it is made, should be submitted at the time the application for test is made. This material should be sent prepaid to Approval and Certification Center, RR 1, Box 251, Industrial Park Road, Triadelphia, WV 26059.

(b) When this lamp has been inspected by MSHA, the applicant will be notified as to the amount of material that will be required for the tests. In general, the material required will be as follows: (1) Thirty complete lamps; (2) 500 bulbs; (3) 50 feet of cord; (4) a battery discharge rack for 20 batteries; and (5) a 50-bulb rack. Specifications for items (4) and (5) will be furnished by MSHA.

(c) The applicant will be notified of the date on which the tests will start and will be given an opportunity to witness them.

(d) *Observers at formal investigations and demonstrations.* No one shall be present during any part of the formal investigation conducted by MSHA which leads to approval for permissibility except the necessary Government personnel, representatives of the applicant, and such other persons as may be mutually agreed upon by the applicant and MSHA. Upon granting approval for permissibility, MSHA will announce that such approval has been granted to the device and may thereafter conduct, from time to time in its discretion, public demonstrations of the tests conducted on the approved device. Those who attend any part of the investigation, or any public demonstration, shall be present solely as observers; the conduct of the investigation and of any public demonstration shall be controlled by MSHA. Results of chemical analyses of material and all information contained in the drawings, specifications, and instructions shall be deemed confidential and their disclosure will be appropriately safeguarded by MSHA.

(e) Permissibility tests will not be made unless the lamp has been completely developed and is in a form that can be marketed.

(f) The results of the tests shall be regarded as confidential by all present at the tests and shall not be made public in any way prior to the formal approval of the lamp by MSHA.

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(g) No verbal report of approval or disapproval will be made to the applicant. After MSHA has considered the results of the tests, a formal report of the approval or disapproval will be made to the applicant in writing by Approval and Certification Center. The applicant shall not advertise the lamp as being permissible or as having passed the tests prior to receipt of formal notice of approval.

[Sched. 6D, 4 FR 4003, Sept. 21, 1939, as amended by Supp. 1, 20 FR 2718, Apr. 23, 1955; 43 FR 12314, Mar. 24, 1978; 60 FR 35693, July 11, 1996]

§ 19.5 General requirements for approval.

Electric cap lamps shall be complete units. They shall be durable in construction, practical in operation, and suitable for the conditions of underground service. They shall offer no probable explosion hazard if used in gassy or dusty mine atmospheres or bodily hazard from the spilling of the battery electrolyte. They shall exhibit, under laboratory test conditions, the various minimum performance requirements specified in this part.

§ 19.6 Specific requirements for approval.

(a) *Design.* In the determination of the adequacy of the lamp, with respect to design, the following points will be considered: (1) The materials used; (2) construction; (3) weight; (4) amount of light; (5) distribution of light; and (6) exclusion of dust from the headpiece. The suitability of the materials and the construction shall be determined by preliminary inspection, by dropping tests,¹ by durability tests of the cord and cord armor,² and by the general behavior of the lamp equipment during the investigation. The amount and distribution of the light shall be judged both by observation of the illumination

¹Batteries are dropped 3 feet, at least 20 times onto an oak floor. Headpieces are dropped 6 feet, at least 20 times, onto concrete.

²Ten cords, assembled with the cord armor and outlet of the lamp with which it is to be used, are slatted at least 100,000 times through an arc of 50 degrees at approximately 90 slattings per minute.