Examination of Explosives.—The usual examinations of explosives arriving in the country have been carried out during the year, all shipments being found in good condition.

Accidents.—One fatal accident in the storage of authorized explosives was reported during the year. A country roadman was in the habit of keeping a small quantity of gelignite in his hut. It is presumed that he was getting his daily requirements of gelignite and detonators when the explosion occurred, but there is no evidence to show the actual cause. Several accidents of a more or less serious nature took place during the year, principally from premature explosions while using explosives for log-splitting or well-boring.

It is necessary once again to stress the dangers arising from careless and improper use of the chlorates of sodium and potassium. Chlorate of sodium is now largely used as a weed eradicator, and it is highly important that the public should be aware of the possible dangers in its use. The accidents reported are caused either through the ignition or explosion of the chlorates when used for weed-killing purposes, or due to premature explosion of home-made blasting-powders, composed usually of sodium chlorate mixed with some organic matter such as sugar or sulphur. Two fatal accidents occurred during the year. In one case the deceased had been spraying ragwort in the afternoon with a solution of sodium chlorate and had neglected to change his clothing afterwards. Later in the evening the lighted head of a match fell on his clothes, which immediately burst into flames. In the time which had elapsed after the spraying was finished the moisture had dried out of the clothes and they were in a highly inflammable condition, being impregnated with finely divided chlorate. The second fatal accident was caused through the use of a mixture of chlorate of sodium and sugar as a blasting-explosive. A youth was engaged in ramming the mixture into a bore-hole in a log when the charge exploded prematurely. The youth received injuries from which he died later, and his brother, who was standing by, sustained painful injuries. It is to be noted that the manufacture of such explosives is a breach of the regulations under the Explosive and Dangerous Goods Act, 1908.

In addition to the above, a number of non-fatal accidents mostly serious, occurred during the year in connection with the use of sodium chlorate. One of these accidents is particularly worthy of note as showing the extreme sensitiveness of this material. The chlorate was being carried by a farmer in a small tin in his hip pocket, and at the time he was driving a mowing-machine. It is evident that a small quantity of the chlorate escaped from the tin into his pocket, where it was probably mixed with organic dust. Friction between the tin and the seat of the mower was sufficient to cause a minor explosion, which caused the ignition of the clothing and resulted in painful burns.

The number of accidents in which chlorates are involved appear to be steadily mounting. Two prosecutions were taken during the year, both arising from the illegal use of chlorates in blasting-powder mixtures. Convictions were secured in each case, but heavy penalties were not imposed, as in both cases the defendants had been seriously injured in an accident with the explosive, and the purpose of the prosecutions was primarily to call public attention to the hazardous nature of chlorate mixtures, and to the fact that their manufacture and use in New Zealand is not permitted by law. It is proposed that in future a prosecution will be taken in every case where persons are found manufacturing chlorate mixtures for explosive purposes, and heavy penalties will be asked for.

In a large percentage of cases the accidents in connection with chlorate-spraying arise from ignorance of the hazards involved. The chlorates are rich in oxygen, which is readily given off when the material is heated, even to the slight degree involved in friction between two hard surfaces. It is therefore dangerous to expose any material impregnated with chlorate to fire, or even to submit it to rough treatment. From the accidents which have occurred the following are indicated as necessary safeguards in its use:—

1. Chlorate should be stored only in metal containers, and steps should be taken to prevent the powder being spilt on wooden floors.
2. Extreme care should be taken that organic materials (oil, flour, manures, floor-sweepings, &c.), are not mixed with it. Any building where chlorate has been stored should be well washed out with plenty of hot water.
3. When spraying with chlorate special clothing should be worn, preferably a knee-length coat of waterproof material and rubber thigh boots. These can be easily and quickly washed free of chlorate after the work is finished.
4. If ordinary clothing is used it should be of wool as this is less inflammable than cotton. The clothing should be reserved for this work and removed immediately the day's spraying is completed. The clothing used for spraying should not be taken into ordinary wear until it has been well soaked in water and afterwards washed and rinsed with changes of warm water.
5. Smoking should not be permitted during spraying operations, or while wearing clothing which has been used while spraying.

Dangerous Goods.—Local-authority administration: The number of licensing authorities stands at 163, no new licensing authorities have been appointed during the year. Supervisory inspection visits were made by departmental inspectors as in past years.

Departmental administration: Inspection work in districts directly under the control of the Department was carried out to the fullest extent possible. Licenses to the number of 1,691 were issued as against 2,033 for the previous year. No new legislation was passed during the year.

Accidents: The departmental records contain reports of three fatal accidents during the year. The first accident, which resulted in the death of a woman from burns, arose from the ignition of the vapour from some petrol which was being used for dry-cleaning purposes in a kitchen whilst the range was alight. The second case was somewhat unusual. Briefly, the circumstances were that, after reading in bed for some time, a woman reached over to put out the light and in doing so knocked over an uncorked bottle of benzine nearby, the vapour immediately igniting at the lamp and the flames burning the woman so seriously that she died shortly after. In the third case, a preparation