Scientists at the Maritime Regional Laboratory are interested in a different type of project and have concerned themselves with the study of the composition of seaweeds and their use as feeds and fertilizers; the investigation of Irish moss of which millions of pounds are exported annually; the extraction of the gelling agent from this moss and much information about it that can be used in the commercial production of better extracts; and the search for a good method for preparing algin from rockweeds which are abundant in the Maritime Provinces. Algin finds many uses in the textile, food and pharmaceutical industries.

Highlights of the work of other Divisions are as follows:—

Scientists and engineers in Building Research made soil temperature studies in the Far North as part of their permafrost investigations in co-operation with the Army, extended the snow cover survey of Canada, and completed the full-scale testing of a large pre-stressed, pre-cast, 100-ft. reinforced concrete beam.

In the Division of Mechanical Engineering, a start was made on a hydraulic model of a navigation lock for the St. Lawrence Seaway. Designs were prepared for two models of the St. Lawrence River, each representing a five-mile section. A special "re-heat" system, developed to increase the thrust of a jet engine by injecting additional fuel into the tail pipe, reached the testing stage. Aircraft icing, de-icing, and anti-icing research yielded valuable results; the low-temperature laboratory participated in flight testing, under icing conditions, of a CF-100 aircraft equipped with icing protection.

The Division of Radio and Electrical Engineering installed an automatic radio beacon at Charles Island, Hudson Strait. Microwave trial equipment for two isolated fog-alarm stations on the Pacific Coast was designed and built and a machine for sorting paper forms, such as cheques, was patented. The Division devised and patented a new type of mechanical a-c line-voltage stabilizer, which is now being manufactured under licence by a Canadian company. Engineers from the Division and scientists from medical institutes collaborated in the development of electronic devices for use in surgery, including apparatus for resuscitation of the heart.

Developments that have been brought to a reasonably complete stage in the Division of Applied Chemistry include: a coating for transparent surfaces to render them water repellent; a high-strength rubber-base cement, suitable for bonding rubber and various solids; and an antifreeze formulation that prevents the corrosion of zinc-containing alloys frequently encountered with inhibited glycol solutions at low temperatures.

The Division of Physics operates in two Branches—pure and applied. One of the main functions of the applied Branch is the work on standards of length, mass, electricity, radiation, etc. For instance, one of the groups calibrated a set of carbon filament lamps by the use of a small refractory tube immersed in molten platinum; the brightness of the open end of such a tube at the temperature of the solidification of the platinum is recognized by international agreement as the primary standard of light. This Branch also carried on, among many other things, the mapping of urban areas, aimed at providing economical photogrammetric methods for accurate large-scale plans. In the pure physics Branch, a contribution has been made to the knowledge of how certain metals behave over a wide range of temperatures from close to the absolute zero (459·4° below zero F.) up to 200°C. (392°F.). A universal detector has been developed which can be used to pick out any atomic or molecular beam; the apparatus has already been used to study silver, gold, and boron; until recently these three atoms could not be investigated by atomic beam methods.