He was loaned from the Department of External Affairs to the UN in 1954 and was appointed Chief of Staff of the United Nations Truce Supervision Organization (UNTSO).

In 1956, following the Suez crisis, General Burns became the first Commander of the UN Emergency Force in the Sinai, serving in this capacity until the end of 1959. In 1960, General Burns was appointed Special Advisor to the Government of Canada on Disarmament and represented Canada at the 18 Nation Disarmament Conference. In 1981, Lieutenant-General Burns was awarded the Pearson Peace Medal. His career embodied the finest of Canada's commitment to international peace and security.