

This effort has been continued in Livermore with increasing vigor. For understandable reasons it has been named "Project Plowshare."

In the meantime the Russians have recognized the possibility of work in this area. At the time of the first Russian explosion in 1949 Vishinsky claimed that the Soviet effort was to serve constructive aims. The statement was:

"Right now we are utilizing atomic energy for our economic needs in our own economic interest. We are raising mountains; we are irrigating deserts; we are cutting through the jungle and the tundra; we are spreading life, happiness, prosperity, and welfare in places wherein the human footsteps have not been seen for a thousand years."

There are indications that the Russians have followed up this early proposal. In 1956 explosions of many kilotons were used in China for the purpose of uncovering ore fields. In 1957 the Kolonga river in the Ural Mountains was deflected into a new bed by 30 explosions of 100 tons each which produced overlapping craters forming a new river bed. We have been most interested in these and similar experiments and we asked the Russians to show us the explosion sites and discuss with us these constructive possibilities. Unfortunately the Russians refused any such cooperation and did not permit inspection of the sites. They claim that the explosions were performed by conventional high explosives, a statement which we could not verify since we could not enter the sites. What we do know is that explosions similar to those performed by the Russians could have been performed with nuclear explosives, that such explosions even when performed by conventional explosives are needed as a preparation for bigger explosions in which nuclear power is utilized, and that for really big enterprises nuclear explosions are certainly more economical than the application of chemical high explosives. Thus the early words and the later deeds of the Russians lent some