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Reference

CPA/73/1

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D/9/108

[REDACTED]
Director
[REDACTED]

During his recent visit [REDACTED] mentioned a difference in the Russian text of the PTBT compared with the English version which has some significance, particularly for possible PNE applications.

[REDACTED] has reproduced the attached quotation from a draft paper by [REDACTED] which you may care to see.

We brought this point to the attention of [REDACTED] when we had our recent discussion with the FCO on their draft PNE paper [REDACTED] has sent him a copy of the attached note.

[REDACTED]
CPA

Ext [REDACTED]
[REDACTED]

3 January 1973

cc [REDACTED]
[REDACTED]

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Differences in the Russian and English Texts of the
Partial Test Ban Treaty

The following extract is from a draft paper of 15 September 1972 by [redacted] of Lawrence Livermore Laboratory.

"Three international treaties have been negotiated and gone into force that have had an impact on peaceful uses of nuclear explosions.

A. THE LIMITED TEST BAN TREATY (LTBT)

The first is the Limited Test Ban Treaty, otherwise known as the Moscow Treaty, which bans the testing of nuclear weapons in the atmosphere, outer space, or underwater. Underground explosions, however, are specifically permitted so long as the explosion does not cause "radioactive debris to be present outside the territorial limits" of the country sponsoring the explosion. This prohibition does not in any way affect those PNE applications that involve completely contained explosions, but it obviously impacts on those PNE applications where some radioactivity escapes into the atmosphere. Although special emplacement conditions and the use of very "clean" explosives will reduce this radioactivity to very low levels, modern radiometric and radiochemistry techniques can detect radioactivity levels that are many factors of 10 below the level of concern for public health. Of great importance is the amount and form of this small amount of radioactivity and what are its characteristics when it crosses an international border.

It is of considerable technical significance that the Russian language version of the LTBT treaty differs from the English language version in this important area. Literally translated the Russian language version says, "fallout of radioactive deposits beyond the territorial limits ..." "Radioactive debris" can consist of both gaseous and particulate radioactivity that may or may not fall to the ground, whereas "fallout of radioactive deposits" would appear to refer only to that fraction of the radioactivity that actually falls to the ground. Since gaseous or very fine particulate material may travel thousands of miles before it is removed from the air by precipitation or by diffusion into the ground, whereas particulates will "fall out" of the cloud within a few hundred miles, the English language version is considerably more restrictive than the Russian language version.

Thus, although this treaty represents limitations on the type of nuclear explosions that may be carried out, and the limitations depend on the language, both the U.S. and the Soviet Union have carried out numerous nuclear cratering explosions under its provisions. However, the U.S. has generally recognized that some accommodation agreement would have to be negotiated through the U.N. Security Council or the IAEA if a major excavation project such as a new sea level Panama canal were to be constructed".