May 21, 1974

Report from the Brazilian Foreign Ministry to President Ernesto Geisel, 'Subject: The Indian nuclear test'

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Summary:

This is a note from the Brazilian Minister of Foreign Affairs, Mr. Antonio Azeredo da Silveira, to Brazilian President Ernesto Geisel, regarding India’s nuclear test in 1974. It indicates the main consequences of the Indian test to both the world and Brazil, and suggests that Argentina has the necessary incentives to follow India’s path.

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INFORMATION FOR THE PRESIDENT OF THE REPUBLIC

Date: 21 May 1974

Subject: The Indian nuclear test

The nuclear test carried out by India is certain to have a great repercussion in the world scene. For the first time since the conclusion of the Treaty on the non-proliferation of Nuclear Weapons (NPT) in 1968, a country - and a developing country at that - rises to nuclear status, thus defying number of political, diplomatic and technical postulates of the international scenario, among which one can mention the famous theory of "pragmatic balance", consistently upheld by Secretary Kissinger, and the statement, so many times repeated, that it would be inevitable to carry out a number of atmospheric tests before going forward to underground experiments.

2. Questions are obviously raised about the future behavior of other quasi-nuclear States, such as Israel, and Argentina, closer to our interest and object of further consideration, whose option in favor of natural uranium as fuel for its plants in Atucha and Rio Tercero would have been strongly influenced by strategic motivations to the extent that the natural uranium reactor produces twice as much plutonium as an equivalent enriched uranium reactor. The entrance of a sixth member in the "atomic club" disturbs the policy of "freezing of world power" and reopens the debate on the resignation of smaller countries with the inequality established by the NPT.

3. The process of review of the NPT that just started in Geneva will suffer the political impact of the Indian test. The superpowers will feel tempted to make the safeguard norms more rigid and to restrict their programs of nuclear cooperation, especially with non-signatories of the Treaty. It should be noted that the NPT was the highest point of the "détente", when the Soviet Union demanded the commitment of non-nuclear armament by Germany in exchange for any collaboration with the West.

4 The Indian test will have immediate repercussions at the Conference of the Committee on Disarmament (CCD) headquartered in Geneva, of which Brazil is a member.

5. The Brazilian delegation in Geneva is instructed to take a discreet position on the issue in the informal contacts that it usually maintains with the other members of the CCD. Itamaraty does not intend to make any comment in the next few days on the Indian test and shall rather reserve itself to mention it in a non-contentious manner in the context of an general intervention to be made by the Brazilian delegation in the forthcoming month of June or July, on the occasion of the Summer session of the CCD.

6. There are no political, economic or legal reasons that recommend any reproach by Brazil with regard to the Indian experiment, which in reality is in accordance with the general policy of Brazil in international forums directly related to the problem of disarmament.

7. Brazil maintains good relations with India an area of the Asian continent where the strategic balance will be most affected by the new status of India, countries in whose security we are not especially interested. We also have a nuclear cooperation agreement with India, signed in 1968, which would facilitate our access to the Indian technology of production of explosives. In this connection, one should note the statement made to the press today by the Ambassador of India in Brazil, who expressly admitted that possibility. Besides, the Indian test was underground and with stated peaceful purposes, in spite of all efforts of the international community, the date no agreement on the total prohibition of nuclear tests. it has not yet been possible to extend to underground tests the prohibitions contained in the Treaty of Moscow of 1963, that apply to tests in the atmosphere, the seabed and outer space. The big powers are opposed to that, especially the United States of America and the Soviet Union, which have been increasingly carrying out underground explosions under the pretext that they are essential not only to the development of new weapons but to the quality control of already operational devices.

8. On the other hand, both with relation to the Non-proliferation Treaty (NPT) and to

the Treaty on the Denuclearization of Latin America (Tlatelolco) Brazil has invariably defended the legality of explosions for peaceful purposes which, in our view, are an essential element of the process of development of nuclear technology, to which all countries have the right of access.

9. The Indian experiment I similar to the tests recently carried out by France in the South Pacific about which Brazil showed some concern, albeit moderate. The preoccupation of the Brazilian government, as a Party to the Moscow treaty, also reflected fears often stated by Latin American countries on the Pacific coast which we had an interest in supporting for reasons of regional politics. The Brazilian attitude had, therefore, a specific political connotation since from the legal standpoint it is clear that the Treaty of Moscow did not apply to France, which is not a Party to it.

10. It is worthwhile to put forth some considerations about the stage of nuclear development achieved by India, which just obtained access to the "atomic club", and by the Argentine Republic, which aspires to that status.

Stage of nuclear development of India

11. The announcement of the detonation of the Indian nuclear device, whose power is of 10 kilotons (half the power of the Hiroshima bomb) is not surprising from the political and technical point of view.

12. Notwithstanding its classical economic difficulties, India was one of the first developing countries to take a serious interest in nuclear r in 1961. Although it has always denied military aspirations, I never failed to stress, as indispensable to its program of peaceful applications, the right to manufacture nuclear explosives and to carry out, on its own, nuclear explosives for civilian ends. Together with Brazil, it was one of the countries that most opposed the Non-proliferation Treaty. With regard to the specific question of explosions for peaceful purposes, there is broad coincidence between the two countries, although Brazil, not possessing the same level of nuclear development, admitted to submit to the oversight of the IAEA its eventual experiments in this area, as contained in the Treaty of Tlatelolco of 1967.

13. The first Indian power reactor started its operation in 1969, in Tarapur, Bombay. It is a 380 Mwe machine, manufactured in the United States, of the light water/enriched uranium type, whose operation was put under a broad safeguards agreement between the United States and India. The second reactor, named Rajahstan, of 200 Mwe, started its operation two years later, in 1971. It I of the type heavy water/natural uranium and was built with Canadian cooperation. The safeguards commitments assumed by India cover, however, only the control of the utilization of the fissionable material generated, as a by-product, from the first fuel cycle. India was therefore free regarding the use of the recycled plutonium after processing. This circumstance and the fact that India is one of the few developing countries, together with Argentina, to possess a chemical plutonium separation plant made New Delhi legally an technically able to produce nuclear explosives on its own like the one just detonated in Rajahstan, in an underground test apparently in conformity with the Treaty of Moscow, of 1963, of which India is a Party.

14. Given the security problems vis-à-vis China, since the 1950's there as a debate in India about whether the country should acquire nuclear armament and produce atomic bombs. The debate increased with the defeat against China in 1952 and with the first Chinese nuclear explosion in 1954. While reaffirming its decision not to become a nuclear weapon power, the Indian government started to encourage nuclearization for peaceful purposes and to develop without restrictions its nuclear and scientific capabilities in this field. India condemned the NPT not only because of its discriminatory and restrictive character for the militarily non-nuclear countries but also because it did not contemplate security assurances for these countries in terms of non-aggression and nuclear protection.

15. Considering the situation of India, recently worsened by the rise in oil prices - it is the second importer, after Brazil, among developing countries - and the dramatic panorama of poverty in India, it does not seem probable that India would move away from its promises of peaceful utilization of the atom or go down the road of organizing a nuclear armament program, which would also require the creation of a specialized air force and the development of ballistic vectors. At least one could not expect that New Delhi would take any decision in this direction in the short run, since a national

program, even limited such as France's, requires resources equivalent to the whole present defense budget of the country, of the order of US$ 1.6 billion.

16. Mrs. Gandhi's declarations on the experiment in Rajahstan follow the traditional line of the reaffirmation of the peaceful objectives of the Indian nuclear program and of non-use of the military option it now has. The concrete factor, however, is that India now leaves the group of quasi-nuclear nations and enters the more restricted circle of the "atomic club" composed, with different kinds of military readiness but at almost practical equality, in the political level, with the United States, Soviet Union, United Kingdom, France and China. In any case, the Indian program of electricity generation, which has already attained 600 MW, will shortly be doubled, by 1977, with three more heavy water/natural uranium reactors of which two that are in the process of installation at Kalpakkan, Madras, with French assistance, do not seem to be subject to strict safeguards. Therefore, together with the know-how to separate plutonium and manufacture nuclear explosives, there will be growing amounts of plutonium available to the Indian government, enough to support a military program, if New Delhi so decides.

Stage of nuclear development of Argentina

17. According to information from the Embassy of Brazil in Buenos Aires in August 1971 the activities related to nuclear research in Argentina have been relatively successful through programs sponsored by the central government and carried out under the coordination and supervision of the National Atomic Energy Commission (CNEA), created in 1950.

18. Still during its first decade of operation the National Atomic Energy Commission (CNEA) was able to present some significant results in its work in research, raising personnel capacity, and uranium prospection, including construction of reactors. In this way, the first radioisotopes were produced in the country in 1953, followed by the discovery of 17 new nucleons in the period 1954-1957. In 1957 the first uranium metallic ingots were produced and in 1958 the first nuclear reactor in Latin America, built entirely in the country, started to operate in Argentina.

19. The episode of the attempt to manufacture the first Argentine atom bomb also took place in this period. The Bariloche Atomic Center is believed to have been in charge of its development. Although the extent and seriousness of this project has not yet been definitively clarified, it seems to have been more serious than initially thought and its realization failed on account of difficulties with the assembling of the detonator of he atomic device.

20. There are today five (5) atomic centers in the country, four research reactors one nuclear plant for the production of electric energy already in operation (Atucha) a second nuclear plant under construction (Rio Tercero) six uranium mining districts (in the provinces of Mendoza and Salta), three plants to process radioactive ore, one chemical separation plant and more than one hundred nuclear research laboratories.

21. The natural uranium reserves in Argentina are seemingly abundant as can be seen from the results achieved in the prospection work already carried out an in execution in the provinces of Salta, Mendoza, La Rioja and Catamarca. It is estimated that an area of 900.000 km2 exists in the country, of which 400.000 km2 are considered of priority. Up to the moment, prospection with positive results has been carried out in 150.000 km2.

22. The Argentine production of uranium oxide is of about 50 t yearly, extracted from the mines of Mendoza and Salta. Proven reserves attain 11.000 t., which if added to 18.600 t of probable resources, could ensure an amount of radioactive ore sufficient to satisfy the demand foreseen for the next twenty years.

23. Argentina has paid priority attention to the activities of prospection and extraction of uranium ore in its territory with a view to ensuring in the near future not only self-sufficiency in its internal supply but also the eventual export of processed ore, which would strengthen significantly its position in the field of nuclear activities.

24. Argentine authorities celebrated with great fanfare the inauguration, last March, of the first Atucha nuclear plant, which should start commercial production of electric energy next July with 70% of its installed capacity and attain 100% of total production (calculated at 319 Mw) in September of the current year.

25. Inspired by its nationalist policy, Argentina claimed in the case of its first nuclear

plant the need for independence vis-à-vis external sources of nuclear fuel supply, adopting, in consequence, a reactor of the HWR kind (hot water reactor) fueled by natural uranium and refrigerated with heavy water, built in Germany (Siemens). This option was presented at the time as the ideal solution for a country with abundant natural uranium reserves and its access to the sophisticated technology of enriching uranium. According to the same line of reasoning, natural uranium could be later processed internally in order to fuel the Atucha reactor. Only the refrigerating and moderating element with heavy water (D2O) would depend from external supply. On the latter point it has been recalled quite optimistically that Argentina could eventually adopt the technology of production of heavy water (D2O), perhaps resorting to collaboration with a more advanced country in this field (Canada was mentioned at the time).

26. On the occasion of the discussion about the construction of the second Argentine nuclear plant, also designed to produce electric energy for commercial consumption but considerably more powerful than Atucha, there was a heated debate in the country around the kind of reactor to be used in the new plant, since ardent advocates of the reactor fueled by enriched uranium came forward arguing that the latter was more economical in terms of its construction and maintenance costs and more profitable regarding the future production of electric power.

27. The nationalistic arguments again prevailed although the President of the Republic himself and one of his ministers had shown their preference for a reactor fueled by enriched uranium. It was thus established that the new nuclear plant, at present already being built at Rio Tercero, province of Cordoba, with a production foreseen at 600 Mw, would receive a reactor of the type CAMDU PKW, fueled by natural uranium and refrigerated and moderated by heavy water (a consortium composed of "Atomic Energy of Canada Ltd" and "Impianti Società Italiana").

28. Still in accordance with projections made by the National Atomic Energy Commission (CNEA) the construction of a third nuclear plant for the production of electric energy will be decided in the current decade, to be located in the province of Buenos Aires. According to the same source, Argentina should produce in 1978 (the year foreseen for the start of operation of the Rio Tercero plant) about 1.000 Mw from "non-conventional sources" and could avail itself of 100.000 Mw installed, of which 40% coming from thermoelectric plants, 30% from hydro and 30% from nuclear sources.

29. Like Brazil, Argentina did not sign the NPT. Argentine reservations to the treaty were concentrated around several points, among which the following stand out: a) the treaty would restrict the options of non-nuclear States in all areas of research related to peaceful explosions, while creating no concrete obligation for nuclear-weapon powers; b) the need to unequivocally ensure the economic development of a country seemed compromised by certain provisions contained in the mentioned international legal instrument; c) there was an evident imbalance between nuclear and non-nuclear States with regard to control and verification, with the latter limited to the non-nuclear ones; and d), finally, the Argentine authorities were concerned with the curtailment of activities related to exchange and commercialization of nuclear equipment and materials, which in the view of Argentina seemed blatant in some of the provisions of the treaty.

30. In order to provide a clear example of the Argentine position regarding the proliferation of nuclear weapons, it is worth noting the statement of the jurist José Maria Ruda, at present a member of the International Court of Justice, who wrote in an article published in 1972 on the question:

"We must distinguish between two aspects that should be analyzed separately. On the one hand is our position regarding non-proliferation in general, but our position on the treaty is different.

Argentina is not opposed to the non-proliferation of nuclear weapons. Until 1968 it firmly supported all initiatives raised at the General Assembly in this field. But this support to the idea of non-proliferation is not unconditional and indiscriminate but rather conditioned, as far as our country is concerned, to the recognition of two fundamental values that must be protected in the instruments to regulate non-proliferation.

The first one, which cannot be cast aside, Is the guarantee of security for each of the members of the international community.

In the present state of the international scene, with nuclear and non-nuclear States, non-proliferation freezes the existing situation.

Consequently, it is imperative that effective assurances are provided to the States that do not possess nuclear weapons by those that, because of their greater military power, bear more responsibility in the nuclear sphere.

The second fundamental value that must be protected as non-proliferation is achieved is technological advancement, particularly for developing countries, because such technological progress is the basis for all social and economic development. It has been tirelessly repeated in international forums that one of the factors that most affect in current times the maintenance of peace is the technological struggle among developed countries, and development and non-proliferation cannot be yet another reason to deepen further existent divergences. In 1968 the Argentine delegation was very firm in this connection".

31. Besides the above mentioned Argentine attempt at building a nuclear weapon some references have come to the fore in the country during the past couple of decades about the possibility that it becomes a member of the "atomic club".

32. Among such references seems particularly relevant the one made by General Osiris Villega, then exercising the function of Secretary of the National Security Council (CONASE). In an article entitled "Nuclear Policy, Development and National Security", he made the following comments on what he called "national challenge": "The attainment of the status of nuclear power must be one the basic goals of our country." Further down, when mentioning the achievements of Argentine nuclear technology and those that should be reached in the short run, the Secretary of CONASE warned the Argentine people against the pressures exerted in the international sphere and recommended that "In the light of what precedes, it is imperative for our country not to enter into international commitments that may effectively curb the freedom of action of the State in the field of nuclear energy. That is, no treaty that results in the voluntary renunciation of our right to carry out different lines of research and development regarding the use of nuclear energy for peaceful purposes and the means to generate such energy". General Villegas completed his views on this national objective and concluded by stressing that that the acquisition of nuclear status does not necessarily require the existence of a nuclear arsenal, but simply the capacity to "master adequately the techniques for the peaceful uses of nuclear energy - including explosions for peaceful purposes - technological capability and infrastructure to provide sufficient assurances of convertibility and the objectives of national defense".

33. Still with regard to the adoption of a line of reactors fueled with natural uranium, an issue dealt with above, it seems worthy of notice the fact that in its defense some circles of opinion in Argentina mention the by-product generated by such reactors: plutonium, used in the most modern reactor called "breeders" and also for the manufacture of the atomic bomb.

34. On the latter use, it is fitting to quote part of the following commentary from the Peronist newspaper "Mayoría" that reproduced declarations by Engineer Francisco Bazán, former president of the Provincial Company of Energy of Córdoba: "Lastly, a argument of great weight in the military sector: the immediate by-product of the burning of natural uranium is plutonium in the highest proportion (809 grams per kilogram of natural uranium) and plutonium is the raw material with which a country of the technical and industrial level of ours can immediately produce the "A" bomb. In the face of the overwhelming and high-handed imperialist strategy practiced by Brazil in Latin America, the possibility of Argentina to manufacture bombs is a psychological deterrent force to which no country should renounce. Moreover, in the Latin American consensus, the potential military capability of Argentina would re-conquer the prestige acquired by Brazil in recent years thanks to its consistent, firm and implacable policy of expansion. Although Argentina certainly would never make use of nuclear weapons, the mere possession would radically change the geopolitical and strategic panorama in the continent".

35. Taking into account the above mentioned references in the light of the political

and strategic context of an Argentina that doggedly pursues an immediate political solution for its main problems, the hypothesis of that country manufacturing a nuclear device seems more plausible. By the same token, the intentional Argentine option for reactors fueled by natural uranium would facilitate an opening toward the "atomic club", entry into which would generate undeniable dividends for Argentina, either for internal policy objectives or for the desired international projection of the country.

36. I must be note, in closing, that Argentina has been looking for new forms of international collaboration in the field of nuclear energy, as demonstrated by a recent mention to Soviet assistance to Argentine nuclear development program, made by the Argentine minister of Economy in Moscow. Although no details have been provided on this issue, one could speculate on the scope of the Argentine interest and the Soviet willingness. Taken in their broadest scope, these two elements could ensure the supply of basic inputs to Argentina, such as heavy water, for instance, as well as assistance in other fields of nuclear research.

37. In the light of the above, the possibility that Argentina proceed to a solution similar to that followed by India seems worthy of attention, by seeking admission into the select group of nuclear powers, believing itself to be the only Latin American in a position to do so. For achieving this objective, it should be taken into account the fact that starting in the current year Argentina will be able to produce 150kg. of Pu-239, enough to support a program of production of 15 devices of 10 kilotons. This would mean, as pointed out above, that the county could also possess plants for the reprocessing and purification of plutonium. Argentina would, indeed, enjoy greater freedom than India or even Brazil, to the extent that as a non-ratifier to the Moscow Treaty, it may carry out tests with nuclear explosives, not only underground but also underwater and on the Earth surface.

(Signed) A.F. Azeredo da Silveira

Minister of State for External Relations