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BACKGROUND PAPER ON FACTORS WHICH COULD INFLUENCE NATIONAL
DECISIONS CONCERNING ACQUISITION OF NUCLEAR WEAPONS

Introduction

This paper examines the factors operating in eight important countries to advance or inhibit decisions to seek acquisition of nuclear weapons. The study also suggests a few illustrative incentives and sanctions which might impel national policies towards a course of continued abstinence from producing nuclear weapons. However, no attempt has been made to consider a balance of incentives and pressures which the US might attempt to apply (except in the case of India).

The nations considered are India, Israel, Japan, Sweden, the Federal Republic of Germany, Indonesia, the UAR, and the Republic of South Africa. In the cases of Indonesia and the UAR (and Pakistan, not considered), it should be noted that the threat posed by the continuing spread of nuclear weapons capabilities is not so much the possibility that those governments will decide to manufacture nuclear weapons, as that those countries might offer base rights to the USSR or Communist China.

Some of the information in this paper is sensitive, and should be closely guarded.

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India*

A. Capability

The estimate of the intelligence community is that India has the capability of producing and testing a first nuclear device in one to three years after a decision to do so. A weapon deliverable by the Indian Air Force's Canberra light bomber could probably be produced about two years after the first test. India now possesses all the basic facilities necessary to produce plutonium. A plutonium separation plant was completed in the first half of 1964. Technical evidence suggests that India is now in a position to proceed with a nuclear weapons research and development program at minimum cost and delay.

B. Nuclear Policy

The present policy of the Government of India is to use nuclear energy for peaceful purposes only. This had been Indian policy for many years prior to the detonation by the Chinese Communists of a nuclear device. Since that event, Prime Minister Shastri and his colleagues have restated that policy on a number of occasions. It seems likely, however, that this policy will be kept under review during the months ahead.

* This paper is based upon a more detailed study entitled, "Indian Nuclear Problem: Proposed Course of Action" which was prepared for and approved by the Committee on Nuclear Weapons Capabilities (the Thompson Committee), and submitted to the Committee of Principals. It also draws upon information regarding India contained in NIE 4-2-64 entitled "Prospects for a Proliferation of Nuclear Weapons Over the Next Decade."

C. Factors Tending to Advance or Inhibit a Decision.

1. Political

Gandhian principles of non-violence and India's longstanding policy of exploiting nuclear energy for peaceful purposes only, which is based upon these principles, are the principal political factors which have kept India from embarking on a nuclear weapons program. There are, however, a number of political factors which could induce the Government of India to change its present peaceful uses only policy. The pace and scope of the Chinese program and the nature of Chinese policy will of course have much to do with what India does in the future. The present Indian Government can ill afford once again to face the political consequences of being caught with inadequate defenses as it was when the Chinese attacked in 1962. Since that attack the Indians have shown an increasing desire to develop the capability of producing the full range of military equipment needed to meet their defense requirements. Internal political pressures to extend this policy to the nuclear field could cause the Government to change its policy. Consideration of international prestige will be of great importance in determining future Indian policy. If India cannot maintain its position as an Asian leader in the fields of science and technology through its progress in peaceful fields, it may feel impelled to embark upon a weapons program. Furthermore, if the Chinese Communists gain significant international recognition at the expense of India because of their nuclear detonation, the Indians might be more inclined

to change their policy. For example, the Indians would be concerned if the Chinese Communists were able to "bomb their way" into the ENDC, and assume an important role in this body, undoubtedly causing India to play a less influential one.

2. Economic

Although economic factors are being cited by the Government of India as a reason why India should not embark on a weapons program, by themselves they probably would not inhibit India from changing its present policy. This is because the development of a capability to produce a limited number of crude devices would not require a significant additional diversion of resources from already planned economic or military expenditures. India has already devoted \$220 million to nuclear development since 1954. An expenditure of an additional \$30-40 million over a three year period would probably be enough for the production of a crude low-yield plutonium device. This sum would be negligible in terms of over-all Indian defense expenditures.

Of course, the Indians would estimate the scale of the weapons program they might need, and its expense, on the basis of their estimate of the scope of the Chinese program. Should their evidence indicate that the Chinese were embarking on an ambitious weapons and delivery program, then the Indians might see any Indian attempt to keep up as too expensive to be justifiable.

3. Military

India considers that Communist China poses a direct military threat to it and that Chinese acquisition of nuclear weapons will increase that threat. Military security factors, however, would seem to have contradictory influences on Indian nuclear policy. On one hand, the military security argument for an independent Indian nuclear deterrent to a Chinese attack is a particularly powerful one, given the looseness of India's collective security arrangements. On the other, some Indians may figure that the development of a necessarily limited Indian nuclear capability would reduce India's ability to obtain military and diplomatic support from the US and the Soviet Union. Furthermore, the Indian military leaders are much more qualified than their relatively unsophisticated political colleagues to judge the military value of a nuclear weapons delivery system of a type which India could produce. Military judgments on Indian nuclear policy might therefore be somewhat more tempered by such factors as the great expense of developing a really effective nuclear deterrent and the difficulty India would encounter in securing a delivery system which could reach the principal Chinese population centers.

D. Incentives Which Might Influence Indian Decision

1. General Approach

The problem we face with India is not so much one of influencing it to make a decision as influencing it to stick to a decision it has already made. We believe our best tactical approach at this time is to

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accept that the Indian Government sincerely wishes to stick to its policy of using nuclear energy only for peaceful purposes and, in response to requests, try to ease the way for the Indians to maintain that policy. For the present, therefore, we do not believe it advisable to use sanctions both because we doubt the effectiveness of the sanctions US interest would permit us to impose and because we consider it important to maintain the US-Indian relationship even if India goes the nuclear weapons route.

2. Specific Actions

The following US actions should tend to make it easier for India to stick to its present policy:

- (a) Consultations. We plan to share with Indian leaders our thoughts on the dangers of nuclear proliferation and possible international action designed to prevent it. During these consultations we may: contrast the threat to India from a Chinese Communist nuclear weapons program with the larger dangers of proliferation; question the value of a limited number of nuclear weapons and make it clear that the economic consequences of an ambitious nuclear weapons program on top of India's present military program would hinder the attainment by India of its larger developmental and social objectives; demonstrate that India can best maintain its national security by strengthening its conventional forces on

a scale which will not endanger economic development while relying in the nuclear field on the deterrent effect of a close relationship with the major nuclear powers.

- (b) Development of an Alternative to Non-Peaceful Uses of Nuclear Capacity. We are studying the feasibility and desirability of agreeing, in response to an Indian request, to cooperate in developing with India one or more projects in the peaceful uses of atomic energy and other advanced technology, such as space technology, which would capture the imagination of Indians and Afro-Asians and conclusively demonstrate the advanced progress of Indian science.
- (c) Intensification of Efforts to Build Restraining International Climate. We are intensifying our efforts to build an international climate which would restrain India and other nations from producing nuclear weapons.
- (d) Assurances. We believe we have already reinforced Indian leaders in their present policy by providing the general assurances which were included in the President's statement of October 16 and his speech of October 18. For the present, we believe these

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assurances are adequate for our purposes.

While we may at some time wish to restate these assurances privately and confidentially, we doubt that the Indians would desire public assurances, which they would find inconsistent with nonalignment. At some time we might wish to indicate to the Indians that we would have no objection if they sought similar assurances from the Soviet Union.

Our actions about the Chinese periphery will have much to do with the dependence the Indians place on our assurances. The presence of US forces in the Pacific strengthens those assurances. Any dilution of our defense commitments in this area would weaken them. It is certain that the Indians are watching our fortunes in Southeast Asia closely and, regardless of whatever public posture they may take, will be more inclined to depend upon us if we succeed and less if we fail.

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Japan

1. Capability to Produce Nuclear Weapons

It is estimated that Japan could produce and test a first nuclear device by about 1970, without violating existing safeguard provisions, and as early as 1966 if those provisions were ignored.* However, Japan has no source of uranium free of safeguards, and domestic restrictions--both legal and psychological--make it unlikely that Japan will actually develop this potential within the next ten years. This is our current net estimate, but there are factors affecting Japan's ultimate decision on nuclear policy, which cannot be ignored, which make any such prediction uncertain.

Japan's potential as a member of the nuclear "club" is not limited to the capability to produce and test nuclear devices. It has the industrial plant, technological capacity, and economic base to create a deliverable nuclear force, probably comparable to any in the world except those of the US and the Soviet Union, and superior to that of any potential rival in Asia. The principal obstacles now apparent to such a course are all subject to change. If only because of its formidable potential if it should decide to enter the nuclear weapons field, Japan should be closely watched and most carefully treated over the next several years.

* NIE 4-2-64, October 21, 1964, and CIA Report OSI-SR/64-55, November 18, 1964.

2. Factors Supporting or Opposing a Decision to Produce Nuclear Weapons

A. Opposing

(1) Psychological and Moral Inhibitions. However far they may have come in other respects, the Japanese have just begun to recover psychologically from their traumatic defeat in World War II and the nuclear bombings of Hiroshima and Nagasaki. The principal obstacle to any significant expansion of Japan's military establishment--and particularly the creation of a nuclear force--is the syndrome of fears and inhibitions regarding both the development of a strong military establishment and the use of nuclear energy in all its forms, which continues to dominate popular reaction and official policy. The depth of these fears and inhibitions cannot be overemphasized. Even today, twenty years after the end of the war, these relegate Japan's conventional defense forces to a drastically limited role and, indeed, raise controversy over such basic symbols of nationalism as the national flag and national anthem. The "no war" clause (Article 9) of the Constitution is frequently cited as the main deterrent, and it does represent at least a technical impediment to a major defense expansion; this restriction, however, is essentially only a surrogate for the main barrier, which is psychological. There are also obvious political and economic objections to the major diversion of national resources from the public welfare and consumer sectors of the economy which a nuclear weapons program would entail; even these, however, would take on a new perspective if fundamental attitudes were to change, and they are not the basic inhibitions.

(2) Lack of Positive Incentives. There is little at this point to offset these inhibitions and propel Japan toward such a course in a positive sense. Few Japanese discern any clear and present danger to Japan's security, and of those who do most are content to rely on the United States to protect Japan's interests. Insofar as the Soviet Union poses a threat, that threat is neutralized (or at least minimized) by the US nuclear umbrella, and Japan could not realistically hope for many years, if ever, to alter this fundamental power balance to its own advantage, even with an all-out nuclear effort. Communist China, on the other hand, is simply not recognized as a threat, not only because of the primitiveness of its nuclear capability, but because most Japanese opinion still continues to regard the Chinese as benignly disposed toward Japan.

(3) US Influence. A third deterrent will be the persuasive influence which the US can exert on Japan by virtue of the broad mutuality of interest which exists between the two countries. So long as this basic relationship remains sound and mutually fulfilling, Japan is not likely to disregard the wishes of the US on such a major matter, if any reasonable alternative is available. In contrast to the case of India, there already exists a firm US treaty commitment to aid Japan if she is attacked, and the presence of US nuclear power deployed in the Far East in readiness to meet this commitment.

B. Supporting

(1) Changing Attitudes. While the aforementioned anti-military, anti-nuclear, and other inhibitions are not likely to be overcome in the near future, it is apparent that they represent an abnormality induced by the war rather than a permanent part of the Japanese national character. We should not, in fact, wish them to be permanent, for they also constitute the principal barrier to Japan's assuming a more useful non-nuclear military role, as well as to the full and free use by the US of its bases in Japan. Already there is evidence that these psychological barriers are slowly beginning to break down. Popular opinion surveys indicate, if no real enthusiasm, at least a growing acceptance both of Japan's own military establishment and of the US military presence in Japan. The relatively calm reaction to the recent visit of a US nuclear powered submarine showed a much more sophisticated appreciation of nuclear propulsion, and even in a military application, than one would have thought possible only two or three years ago. We should, of course, welcome and encourage these trends. But we should recognize that, as they develop, the psychological restraints which now weigh so heavily against Japan developing its own nuclear force will also tend to disappear, and we must ultimately be prepared to confront a developing Japanese position of that question based on rational consideration of its own self-interest.

(2) Chinese Capability. The Chinese Communist nuclear detonation per se is not likely to alter basic attitudes in Japan. As the Chinese Communists succeed in building a deliverable nuclear striking force, however, the Japanese will almost surely react. This reaction will not be the same for all Japanese, and many will unquestionably shrink further back into the pacifist syndrome. On balance, however, the net reaction of the country will probably be a pragmatic look around for means to counter this new threat. The obvious choice, and the one we assume Japan will take, is the continuation of its cooperative security arrangements with the US and its reliance on the US nuclear "umbrella." But there will also be some fairly strong support for the creation by Japan of a nuclear deterrent of its own. The extent of this support will depend on (a) the credibility of the US deterrent as it relates specifically to the defense of Japan, and (b) the degree of satisfaction (or, conversely, of frustration) which Japan is deriving at that time from its over-all relationship with the United States.

(3) Other Factors. There are other considerations which, at least in theory, might tend to favor the establishment of an independent Japanese nuclear force. To many Japanese such a force would be a dramatic demonstration of Japan's industrial and technological prowess, and, as such, an effective outlet for its increasingly manifest national pride. In this regard, Peking's bomb is a factor over and above its purely military significance; for, however sympathetic they may feel toward their Chinese

neighbors, few Japanese regard Communist China as superior to Japan, or would be comfortable with the Chinese in a dominant role in Asia. These considerations, however, are not likely to be the primary determinants in Japan's ultimate decision.

3. Incentives or Sanctions for Influencing the Decision on Nuclear Weapons Production

At least for the present, Japan is largely predisposed against the development of an independent nuclear force. The job we face is to provide acceptable alternatives which will continue to satisfy both Japan's security requirements and its yearnings for self-assertion. This should be a relatively simple matter, given only an accurate understanding of Japan's capabilities, aspirations, and needs. If there is a danger involved, it would be in taking Japan and its predispositions too much for granted and failing to make even the little effort that is required.

(1) A Credible US Nuclear Deterrent for Japan. A manifestly effective US nuclear "umbrella" will obviate the need for Japan to create a nuclear force of its own. The doubts which may arise over the US deterrent will not involve its strength, but rather our willingness to use it in defense of Japan. US determination to commit itself in defense of its allies has been demonstrated, most notably in Korea, Berlin, and Southeast Asia, sufficiently to satisfy most Japanese, at least in the absence of a clear nuclear threat to their own security. There is, however, a continuing need

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for reassurance, and we should not relax our efforts to convince the Japanese that we can be relied upon to assist them if a crisis should arise. Direct public statements to this effect by responsible US officials on appropriate occasions are, of course, highly effective. Constant attention should also be given, however, to demonstrating throughout the entire range of our mutual interests the importance which the US attaches to Japan as a partner and ally. In a more immediate sense, we must make clear that the redeployment of US military forces in the Far East, particularly the withdrawal of certain Air Force squadrons from Japan, does not reduce the effectiveness of our deterrent or reflect a reappraisal of Japan's importance.

(2) Alternative Outlets for National Pride. The national unity and pride which were shattered in Japan by World War II are again beginning to reassert themselves and are likely to do so increasingly with the passage of time. We should encourage and assist Japan to find constructive, nationally satisfying outlets for the pressures which these feelings will inevitably create. Obvious channels, well suited to Japan's interests and capacities, are in the exploration of outer space, the development of a nuclear merchant fleet, and other peaceful uses of nuclear power. We are already cooperating with Japan in all of these fields.

In the military line, we should continue in low key to encourage and exploit the gradual breakdown of Japanese moral objections to military preparedness and nuclear weapons, while at the same time assisting Japan

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to channel its military energies in a responsible conventional role as rapidly as Japan is ready to assume it. We should continue to increase our cooperation with Japan in strategic planning and be prepared in the longer range, if appropriate, to integrate Japan as a major partner in a regional security arrangement based on US nuclear strength.

(3) Preservation of the US-Japan "Partnership". In the broadest analysis, a decision by Japan to create its own nuclear deterrent would probably take place only as the result of a serious breakdown in its cooperative relationship with the United States. The most effective safeguard we can apply against such a decision is to insure that this relationship continues to be more attractive to Japan than the alternative of an independent course. Barring a gross mishandling of Japan by the US, the odds for the foreseeable future are largely against such a deterioration. We should, however, recognize clearly that it could happen, and that US influence on Japan's policies, while still considerable, is based increasingly on mutual interest and persuasion rather than compulsion and superior weight. This consideration, of course, is not peculiar to the problem of proliferation, but it is basic to it, and we should bear in mind that frustrations in seemingly unrelated areas could affect Japan's choice as adversely as other influences more readily apparent.

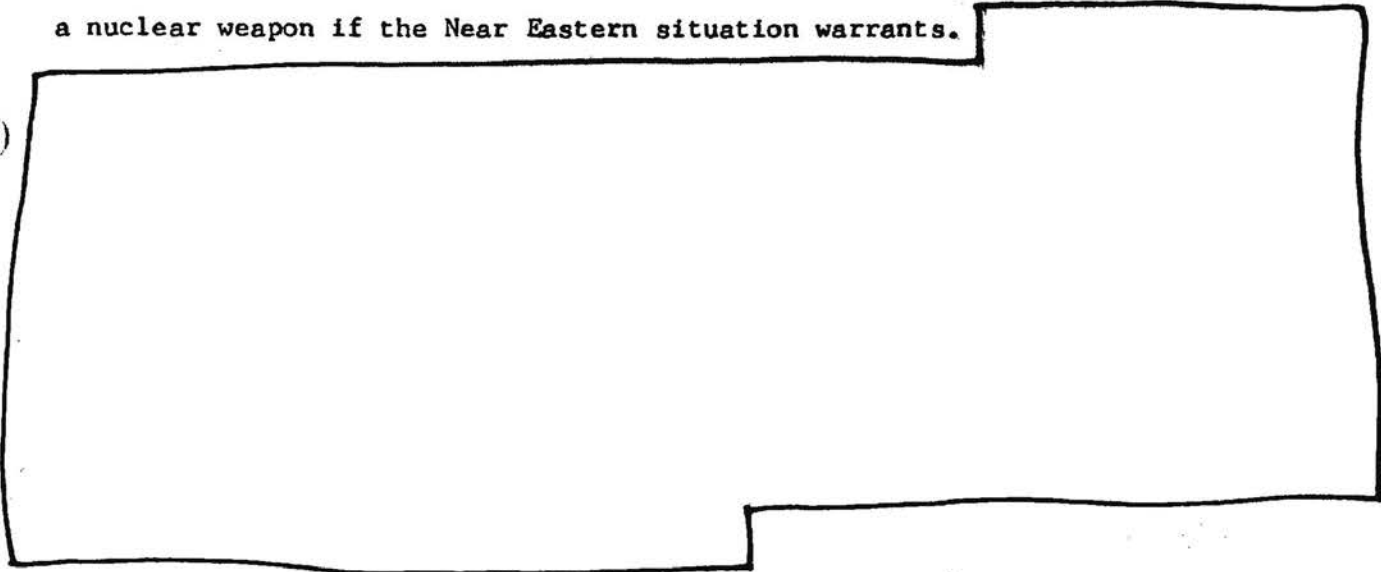
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Israel


A. Present Status

Israel has two reactors: a 5 megawatt reactor under IAEA safeguards, and a 26 megawatt reactor built secretly with French help and covered by no safeguards.

As of January, 1964, Israel's nuclear energy program seemed directed to research, but was adaptable to a weapons making program. Prime Minister Eshkol has told us orally that Israel's nuclear activity is peaceful. Nevertheless, neither he nor Ben-Gurion before him ever ruled out Israel's developing a nuclear weapon if the Near Eastern situation warrants.



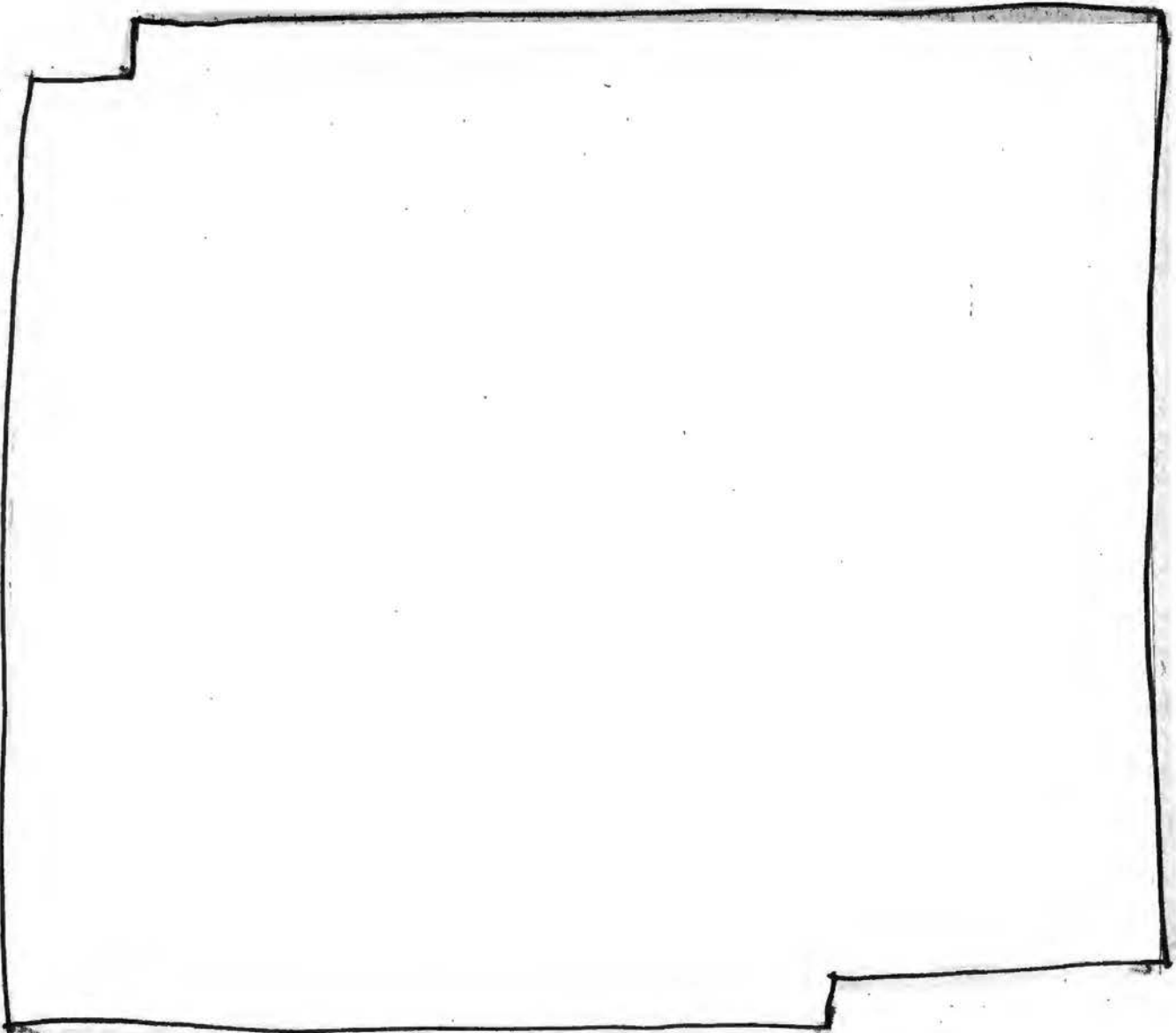
2. Israel now has the technical capability to develop a bomb.



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We believe Israel, without outside assistance, could detonate its first nuclear device two to three years after a decision to develop a weapons capability. If Israel wished to concentrate on producing at the earliest moment an unsophisticated weapon transportable by airplane or ship, it

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could probably produce it two to three years after a decision to do so. Production of a refined weapon specifically adapted to delivery by aircraft or missile would require a year or two more.

Meanwhile, we have convincing evidence that a French firm is developing for Israel a 250-300 mile solid propellant, two-stage missile. The 1,500-2,000 pound warhead is designed for either a high explosive or nuclear payload. On December 7, 1964, the French press reported testing of the Israeli-French missile at the French missile range in the Sahara.

B. Factors Motivating Israel to Acquire Nuclear Weapons

Israel regards maintenance of an independent military deterrent as vital to its survival. Given this attitude the arms rivalry in the Near East has reached a dangerous stage. As Arab unity advances and as UAR missile technology improves, Israel seeks to develop an unmatched, economical counter-deterrent. This seems destined to lead to development of nuclear warheads for Israeli missiles purchased from France.

Lower level Israeli officials speak frankly about Israel's strategy toward the UAR: (a) surface-to-surface missiles targetted on the Nile Delta and (b) a capability to bomb and release the waters behind the Aswan High Dam. Destruction of the Aswan High Dam would require a nuclear warhead.

C. Factors Inhibiting Israeli Acquisition of Nuclear Weapons

Israel seeks a close military association with the United States to supplement its independent military deterrent. It does not consider present US assurances adequate to protect Israel against attack sufficient.

Measures which might induce Israel to forego nuclear weapons are:

1. A formal security guarantee with the US.
2. Coordinated US-Israeli contingency planning against possible Arab attack.
3. Limitation of UAR missile development and application of IAEA safeguards to UAR nuclear facilities.
4. Economic and political sanctions.

The need for the US to maintain a position of balance between the Arabs and Israel in order to be able to exert a moderating influence on Near East tensions, reduces our ability to provide these inducements or apply these sanctions.

United Arab Republic

A. Capability

The UAR does not have the capability to undertake a national nuclear weapons program in the foreseeable future. The UAR's nuclear energy program currently is confined to basic research; it is limited by a severe shortage of personnel, materials, and capital. The only reactor in operation is a small 2 MW research reactor at Inshas (supplied by the Soviets under a 1956 agreement) which is not capable of producing any significant amounts of fissionable material.

The UAR is seeking to develop its sources of uranium and very small quantities have been produced from black sand deposits in the Nile Delta. Negotiations with the West Germans to build a heavy water plant (20 tons annually) have been under way for years but no agreement has been concluded. The UAR is currently interested in building a 150 MW nuclear power reactor at Borg al Arab (near Alexandria) and has issued a call for tenders. However, there is no financing in sight and the prospects for its construction are dim. Even if constructed, diversion of the reactor to the production of plutonium for a nuclear weapons program would require adequate fuel supplies--without safeguards as to use--and the construction of chemical separation facilities. In view of these limitations and the UAR's limited industrial, scientific, and technical resources, its capability to develop its own nuclear weapon is very weak.

B. Attitudes and Factors Tending to Advance a Decision to Acquire Nuclear Weapons

(a) The Threat from Israel - The UAR's primary motivation in seeking a nuclear weapon is to meet the threat which Israel poses to UAR security. If Israel were to develop a nuclear weapon, the pressure on the UAR military would be so great that it would seek every means to obtain a matching deterrent. Since it is unlikely the UAR could develop its own nuclear weapon, the UAR would press the Soviet Union (or, less likely, Communist China) to supply the means or the weapons. The Soviet Union would almost certainly not supply weapons, but it might use the opportunity to acquire a nuclear missile base in the UAR and concomitant leverage over UAR foreign policy.

(b) Formation of the United Arab Command - The UAC was formed in January, 1964, under UAR leadership, as a consequence of Israel's diversion of the Jordan River waters. Annual assessments of \$40 million to increase the armed forces of Arab countries bordering Israel were approved and have been paid for the first year. If the UAC holds together, it could provide a vehicle for mobilizing greater economic and technical resources toward developing an "Arab" nuclear weapon.

(c) Leadership requirements - Nasser's image as the dynamic leader of Arab nationalism is strengthened by his ability to display advanced military technology. It is clear that the UAR's political position would be weakened if Israel were to acquire a nuclear status and the UAR did not.

(d) Acquisition of a Nuclear Weapon by India or States in Addition to Israel - If India were to develop its own nuclear capability, it might supply an additional inducement to Nasser to try to acquire a nuclear weapon in order to place the UAR in the top rung of the nuclear non-aligned.

C. Factors Tending to Inhibit Acquisition of Nuclear Weapons

(a) Military - The UAR does not appear to have a vital long-term military requirement to acquire a nuclear weapon except to counter such a threat from Israel.

(b) Vulnerability - Of all the countries in the Near East, the UAR is the most vulnerable to nuclear attack. A single well-placed nuclear device at Aswan would bring a sheet of water 400 feet high cascading down the narrow Nile valley where the entire Egyptian population is concentrated. Israel is also vulnerable but the peculiarities of its boundaries would cause a nuclear attack to hurt neighboring Arab states almost as much as itself. Thus, for its own survival, the UAR probably sees advantages in preventing the use of nuclear weapons, and therefore also their introduction into the area.

(c) Economic Weakness - Unless the UAR were given a nuclear weapon or accepted a "Cuba-type arrangement" with the placing of Soviet nuclear weapons on its soil, economic factors are almost overwhelmingly against developing a nuclear weapon. At the moment, there is an increasing shortage of consumer goods, certain foodstuffs are in short supply, inflation is threatening, new foreign credit resources are unavailable, and foreign

exchange reserves are virtually non-existent. The leadership is now under considerable strain to allocate more resources to development in order to cope with the rapidly increasing population and meet its rising expectations.

(d) Lack of Nuclear Capability - The absence of any UAR nuclear capability and Israel's technological advantage in the nuclear field have moved the UAR to pursue policies in a collective context which could checkmate Israeli acquisition. The UAR diverted a move within the Organization for African Unity to create an African nuclear free zone, since it did not cover Israel. In its place, the UAR submitted a proposal, approved at the July, 1964, OAU Conference, calling for agreement by non-nuclear powers not to acquire or manufacture nuclear weapons.

(e) Unwillingness of the Soviet Union to Supply Nuclear Weapons - We have unconfirmed reports that the UAR approached the USSR informally for a nuclear weapon and the Soviets have refused. Since the Soviets have kept tight control over their nuclear weapons, not even providing any under Soviet control to their satellites, it is unlikely they would treat the UAR differently, especially with the danger that this act could escalate into an East-West nuclear confrontation.

(f) Private Assurances Received from the UAR - Through private correspondence with the President, Nasser has assured us that the UAR has no thought of bring nuclear war into the Near East nor does it have the resources to devote to weapons of total destruction.

(g) Nasser's Public Statements - Nasser has on several occasions condemned nuclear testing and described nuclear war as one of the greatest dangers facing mankind.

D. Incentives or Sanctions which Might Influence Decision

The nature of the Arab-Israel dispute makes it impossible to approach the UAR on nuclear acquisition on the basis of any formal security guarantee or other formal assurance. Steps which would help deter the UAR from acquiring a nuclear weapon would include the following:

(a) IAEA Safeguards - Obtaining acceptance by Israel of international safeguards on all its reactors would go a long way to deter any UAR decision to obtain nuclear weapons.

(b) Private Assurances - Continuing to convey through diplomatic channels general information on what we know the UAR's neighbors are doing in the nuclear field.

(c) Approaching Third Powers - Through approaches to our allies, other states which are suppliers of nuclear materials, and the Soviet Union, obtaining agreement or assurance from these states not to: (1) supply nuclear weapons, materials or technology for their manufacture to parties to the Arab-Israel dispute, or (2) assist countries in the Near East in their nuclear programs which are not subject to IAEA safeguards.

(d) Supporting Acceptable Non-Acquisition Arrangements - If the OAU non-acquisition resolution is acceptable, identifying ourselves as one of its supporters and obtaining adherence by all the states in the Near East.

(e) Assistance - Offering technical and financial assistance to well-conceived, economic projects in the field of nuclear power, provided that all nuclear facilities in the recipient country are under IAEA safeguards.

(f) Public Statements - Making periodic high-level US public statements emphasizing our opposition to the introduction of nuclear weapons into the Near East. The sanctions would not have to be spelled out. But since Israel and the UAR are heavily dependent on our aid (especially the former), we should leave no doubt of the decisive action we would take in this field should steps be taken toward the introduction of nuclear weapons into the area.

The Federal Republic of Germany

A. Capability

The Federal Republic of Germany could develop a nuclear weapons capability several years after deciding to do so. It could build a plutonium separation plant or it could develop an ultracentrifuge process to the point of being able to produce enough highly enriched U-235 for a nuclear fission weapons program. If the FRG decided to develop nuclear weapons, it could undertake a larger program than any other present non-nuclear power without economic strain, provided that the necessary uranium were available. West Germany has no known domestic uranium deposits of any significance. Over the past few years the FRG has spent more, mostly in the private sector, on its non-military nuclear program than any country other than the United States, the Soviet Union, the UK, and France.* The fuel for all present and planned German reactors is under EURATOM safeguards.

B. German Nuclear Policy

The FRG has formally pledged to its West European Allies, in its adherence to the WEU Treaty of 1954, that it "would not manufacture on its territory any atomic weapons, chemical weapons, or biological weapons." At the present time the FRG shows no inclination to undertake an independent nuclear weapons program. Government leaders have consistently stated this position. There is no significant evidence, despite press rumors, that the

* From NIE 4-2-64, 21 October 1964.

FRG is engaging in nuclear weapons research with France or Israel. German political leaders fully realize that to embark on a nuclear weapons program not only would create serious internal dissension and difficulties with their Allies but would constitute a serious provocation to the Soviet Union. There is very little indication that German public opinion has any interest in the development of a national nuclear weapons capability.

There is no indication that German military leaders, as a professional group, hold opinions on nuclear defense that would differ substantially from those held by the German people as a whole. It is probably true that the German officers charged with strategic planning have an understandably better appreciation of the fact that nuclear weapons in German hands would constitute an invitation to the incineration of Germany in the event of a general war. There is no solid evidence of any interest on the part of the Germany military in acquiring national control of nuclear weapons.

C. Factors Tending to Advance or Inhibit a Decision

Nevertheless, German leaders are aware that, as time goes on and the German people become more conscious of the strength of resurgent Germany, the feeling will grow that the FRG should rise from the ranks of the "have-not powers" with respect to nuclear defense. As one consequence of German sensitivity on this score, the FRG has been reluctant to adhere to any non-dissemination agreement, since this would in effect perpetuate the appearance of its inequality with the US, France, and the UK. Another

consequence is the attraction that the MLF and a more active nuclear role have for German public opinion. There is also growing German interest in the French concept of a European nuclear force. As a result of these attitudes, political pressure in the FRG for a national nuclear force could develop if the Germans came to feel that they were being relegated to a permanent position of inferiority in comparison with other European countries.

D. Incentives

There can be no doubt in the minds of the Germans that none of their NATO allies would like to see Germany arm herself with nuclear weapons. Whether a policy of nuclear self-denial will continue to be attractive, however, will depend not so much on the attitudes of the allies as it will on two main thrusts of US policy.

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Sweden

A. Capability

See NIE 4-2-64 dated 21 October 1964, for the latest information on Swedish capabilities.

B. Policy

(1) Swedish Ambivalence toward the Nuclear Weapons Issue. Since the Supreme Commander of the Swedish Defense Forces first asked in 1954, that Swedish forces be supplied with nuclear weapons by the end of the 1960's, the question of acquisition of nuclear weapons has grown increasingly difficult for the government. Swedish military authorities unanimously agree that nuclear weapons are necessary if the Swedish military establishment is to maintain the current level of effectiveness during a period when a potential enemy (always understood to be the USSR) is developing a nuclear arsenal. Otherwise, conventional defenses will become increasingly powerless to offer any significant resistance, and the traditional and popular policy of relying for security on Swedish defenses alone instead of concluding alliances with major powers will be impossible to maintain. The alternatives would be either to accept international guarantees of neutrality or to accept assistance from NATO or the US. Both alternatives are repugnant to Swedish traditions, and national leaders seem convinced by the military argument.

However, opposition to acquisition, based on emotional and moral arguments against nuclear warfare, has spread throughout the Swedish people. It has been centered in the left wing of the governing Social Democratic Party,

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and fear of defections has caused party leaders to avoid facing the issue. The party is already in a minority in the Second Chamber of Parliament, and the loss of only a few seats would tumble it from power. The Center and Liberal party leaders, although more openly sympathetic to the military argument, are also cautious on the issue because of considerable opposition among their rank-and-file. Only the Conservatives have consistently advocated an immediate government declaration of intent to secure nuclear weapons.

The Government has held that Sweden cannot acquire nuclear weapons from abroad because any circumstances under which they are likely to be available from the US or the UK would contravene Sweden's neutrality policy, and that therefore Sweden can only secure them through manufacture from native resources. No decision on a weapons research and development program need be made until these resources have been developed sufficiently for a meaningful program to be started. In 1959, the Supreme Commander declared that the point had been reached where weapons research could profitably be separated from the peaceful uses program, and tried to force the issue. The four noncommunist party leaders reached agreement in early 1960 on expansion of the facilities of the Defense Research Institute concerned with the "defense against nuclear weapons program" started in 1958, but postponed a decision on weapons manufacture and testing until about 1965, on the grounds that this date was the earliest by which any effective action could be taken.

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(2) Security Situation Unchanged by Test Ban Treaty. Virtually all Swedes have hoped that their country could avoid the nuclear weapons dilemma and have therefore been strong proponents of international nuclear control and disarmament agreements which would decrease the Soviet nuclear threat to Scandinavia. The government has often taken initiatives to reach these goals in the UN and at the 18-Nations Disarmament Conference in Geneva, of which Sweden is a member. Swedish military leaders believe, however, that the terms of the Limited Nuclear Weapons Test Ban Treaty do not improve Sweden's security position. They declare that the failure to ban underground testing will allow the Soviet Union to perfect small nuclear weapons most likely to be used to threaten such countries as Sweden. The treaty therefore will have little effect on the growing obsolescence of Swedish conventional arms as time passes, and Sweden faces the prospect of increasing inability to ward off Soviet pressures.

In this situation, the Swedish Government, supported by the leaders of the four noncommunist parties, has publicly declared that Sweden's signature on the test ban treaty still leaves it free to develop nuclear weapons if conditions require, but has expressed hope that future disarmament agreements and international developments will make such action unnecessary. Only a few leaders, including former Foreign Minister Osten Unden, have stated their belief that the treaty removes any need for Swedish nuclear weapons.

C. Incentives or Sanctions Which Might Influence Swedish Policy

The most important incentive for the Swedish Government would be a widespread acceptance of both a nuclear test ban agreement and a non-proliferation agreement. The Swedes would undoubtedly welcome an arms control agreement affecting the nuclear powers in a more dramatic manner than the test ban treaty but they are likely to consider such a test ban sufficient to satisfy their requirements. Over the long run, it is probable that additional moves in the arms control field or additional progress toward a detente in Europe would be necessary in order to keep the Swedes satisfied with their participation in the treaties. The question of sanctions is not likely to arise in the case of Sweden.

If one or two other countries embark on nuclear weapons programs, the pressures for a similar Swedish decision will rise and probably lead to such a decision. Hence the most important factor in heading off a Swedish decision to produce nuclear weapons would be holding the line so far as other potential nuclear powers, such as India and Israel, are concerned.

Indonesia

A. Capability

Indonesia has one reactor now in operation, a small (250 KW) research unit purchased from General Dynamics, using fuel leased from the AEC, and financed in part under the Atoms for Peace Program. It is incapable of producing weapons-grade fissionable material. A second reactor, to be supplied by the Soviet Union, is in the early stages of construction; planned for completion in 1965, it is reportedly far behind schedule. Detailed information regarding the latter reactor is lacking, but it is understood to be a 2000 KW unit of the swimming-pool type, similar to the one now operating. In addition, the Soviets supplied a small sub-critical assembly, which is now in use at Gadjah Mada University. The Indonesian atomic energy program consists essentially of these three units plus a handful of physicists, several trained in the US under AID auspices. They have been given institutional status at the Lembaga Tenaga Atom (Atomic Energy Institute) under the direction of Dr. Siwabessy, an MD specializing in radiology.

According to competent foreign observers, the LTA is starved for funds and trained personnel, lacking in all but the most rudimentary equipment aside from the two reactors themselves, and incapable of engaging in serious research without foreign sponsorship and supervision. There have been unconfirmed reports that the USSR is providing a small amount of training

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in the nuclear energy field, and that the Indonesians are seeking Chinese Communist assistance as well. However, it is highly unlikely that either country would provide assistance on the scale or of the nature required to permit Indonesia to embark on a weapons development program.

Should Indonesia decide to undertake an expanded program leading to the ultimate production of nuclear weapons, virtually everything needed for the program--not only the plant itself but necessary vehicles, electrical and plumbing equipment, construction materials, etc.--would have to be procured abroad. Indonesia's own industries lack the capacity to produce sophisticated equipment in any field and are not in the process of developing such capacity. The country's current foreign exchange position is such that it would be unable to finance overseas procurement of this equipment from its own resources.

Shortly after the US-supplied reactor went critical in October, 1964, an Indonesian Army spokesman alluded to the possibility that Indonesia would explode its own nuclear device "next year." The same spokesman later admitted privately that this was sheer fantasy, designed solely for external propaganda and to increase the Army's budget. He conceded that Indonesia's nuclear weapons program existed only "on paper."

Our conclusion is that Indonesia will be unable to produce nuclear weapons from its own resources in the foreseeable future. If such a program were developed in Indonesia, it would have to be built, financed and operated by a third country. The latter contingency is most unlikely. Should it

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materialize, the massive inflow of equipment into the country should be detectable many months in advance of the achievement of productive capacity.

B. Factors Supporting or Opposing the Production of Nuclear Weapons

The overwhelming factor opposing the production of nuclear weapons is the sheer inability of the Indonesian government to mount such a program and the unlikelihood that it could persuade a third country to establish such facilities in Indonesia. The fact that Indonesia is a signatory to the test-ban treaty might also be an inhibiting factor, but would be unlikely to deter the Indonesians if they saw any real prospect of joining the nuclear club.

Indonesia's ardent desire for international prestige, its identification of prestige with assertiveness and bluster, and its addiction to the use and threat of force as an essential tool of policy would militate strongly in favor of attaining a nuclear weapons capability if the Indonesians could see any prospect of attaining it.

C. Incentives or Sanctions for Influencing the Decision on Nuclear Weapons Production

Our current ability to influence Indonesia is minimal, and that of other Free World countries hardly greater. Moves to dissuade Indonesia from seeking a nuclear weapons capacity appear unnecessary at present, however, since Indonesia clearly lacks the means to attain such a capacity. If the Indonesians began to shop abroad for equipment which could be used for nuclear

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weapons production, efforts to block them would probably be more effective if directed at the supplier rather than the Indonesians. Should the time come when Indonesia appeared to be in sight of the technical capability to produce nuclear weapons, one possible source of pressure to deter them would be the Soviet Union, which could also be expected to view with alarm the prospect of nuclear weapons in Sukarno's irresponsible hands.

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Republic of South Africa

A. Capability

The Republic of South Africa, the world's third largest producer of uranium concentrates, embarked upon a program of nuclear research in 1959. This program includes work on nuclear power suited to South African conditions, the application of atomic energy to a desalinization program, as well as the application of radioisotopes in medicine, industry, and agriculture. The first four years of this program have been devoted to construction of the necessary facilities and training of about 83 South African scientists in nuclear research in Europe, Britain, and the US.

South Africa has purchased a nuclear materials testing reactor from an American Company (Allis Chalmers) which will be utilized by South Africa's National Nuclear Research Center, under the jurisdiction of the South African Atomic Energy Board. The reactor utilizes highly enriched uranium, of which 4-5 kilos will be provided initially by the United States. The reactor will attain criticality early in 1965.

The authority for the sale of these materials to South Africa was established in an agreement of cooperation between South Africa and the United States, signed in 1957. Under this agreement, South Africa unconditionally guaranteed that materials and equipment transferred by the United States would be used only for peaceful purposes. The same agreement gave the United States full right of inspection of the South African facilities.

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as well as the right to receive regular reports on materials use. Of the presently existing alternate sources, neither the UK nor the USSR would be likely to agree to the sale of enriched uranium to South Africa without complete controls including inspection and the right of removal.

France, which is developing an independent capability for the production of enriched uranium, has within the past year countered the trend toward increasing international isolation of South Africa by concluding an agreement to establish a French space-tracking facility in South Africa. However, rumors that France had offered to assist South Africa in developing an atom bomb were denied in April, 1964, by the Deputy Secretary for Defense in South Africa. The latter also claimed that the decision had been reached that South Africa would not attempt to build an atomic bomb. Although the possibility cannot be foreclosed, we consider it highly unlikely that France presently would agree to sell enriched uranium to South Africa for this purpose.

B. Nuclear Policy

One of the reasons for South Africa's apparent disinclination to acquire nuclear weapons may have been the fact that no potential "aggressor" among hostile African nations possessed or was likely to acquire such weapons in the near future. However, South Africa now faces the prospect of increasing isolation and the possible loss--or at least weakening--of Western military cooperation, except in the event of major hostilities with the communist

world. Furthermore, the Government foresees the possibility of organized international intervention in its "domestic" affairs, perhaps under the cloak of the UN. The major Western powers, with the exception of France, already have adopted total arms embargoes against South Africa. This has led to a redoubling of South Africa's efforts to provide for local production of a wide range of conventional weapons (including aircraft and rockets). Although there is no evidence that South Africa has launched or intends to launch a nuclear arms development program, the Government may regard its current research as insurance against such a necessity. Even without outside assistance, South Africa probably could develop a prototype weapon in five years. Thus, while economic realities and the low probability that any African state will develop an atomic weapons capability over the next few years would seem to militate against a South African program in this field, emotionalism, latent fears, and the desire for a strong deterrent could lead South Africa to embark upon it nevertheless.

We consider it unlikely that the Republic of South Africa would seek to acquire nuclear weapons from other nations at this time. If, however, indications were received that hostile African nations are pursuing nuclear weapons development or acquisition programs, the Republic would be likely to enter the nuclear arms race.

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C. Incentives or Sanctions Influencing Decision

Any decision regarding nuclear weapons will be made on the basis of the considerations noted above. Once taken, a decision to produce or acquire nuclear weapons would not easily be altered by external sanctions. The Government's attitude would, however, be strongly effected by its assessment of the willingness of NATO allies to come to its defense in the event of a threat of external aggression.

Department of State
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