Y4:F 76/1:Is 7/3
1017-A

ISRAELI ATTACK ON IRAQI NUCLEAR FACILITIES

"BUHR STORAGE"
[Sep. #97-22]
Univ. of Mich.
B 1,123,224
NOV 23 1981
Reference

HEARINGS

BEFORE THE

SUBCOMMITTEES ON INTERNATIONAL SECURITY AND SCIENTIFIC AFFAIRS

ON

EUROPE AND THE MIDDLE EAST

AND ON

INTERNATIONAL ECONOMIC POLICY AND TRADE

OF THE

COMMITTEE ON FOREIGN AFFAIRS HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

JUNE 17 AND 25, 1981

Printed for the use of the Committee on Foreign Affairs

UNIVERSITY OF MICHIGAN LIBRARIES
NOV 19 1981
DEPOSITED BY THE UNITED STATES OF AMERICA

U.S. GOVERNMENT PRINTING OFFICE
81-844 O WASHINGTON: 1981

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Item:	Quantity
Ambulance	84
HAWK missiles	153
175mm rounds	25,000
MARK 84 bombs	1,000
TOW missiles	847

Other items due in the fourth quarter of 1981 include:

Item:	Quantity
F-15 aircraft	5
M60-A3 tanks	49
M113 armored personnel carrier	135
M88A1 recovery vehicles	25
81mm mortar rds	71,000
175mm rds	40,000
Sidewinder missiles AIM-9	300
TOW missiles	916

The total financial value of U.S. military supplies in the pipeline is extremely difficult to calculate at any given moment. Such variables as transportation and handling changes, purchase lead-time versus delivery time, and follow-on support costs make day-to-day accounting all but impossible. Last year, however, Israel received $2.185 billion in U.S. assistance, and under current plans it will continue to receive at least $2 billion per year.

The adminsitration is continuing its study of the implications of the June 7 attack; no decision has been taken regarding the duration of the F-16 suspension.

Mr. STOESSEL. As to a decision on lifting the suspension, I think it is premature for me to comment on that. This is a question which remains under review.

Mr. BROOMFIELD. Thank you, Mr. Chairman.

Chairman ZABLOCKI. Mr. Solarz.

Mr. SOLARZ. Thank you very much, Mr. Chairman.

PURPOSE OF IRAQI PROGRAM

Mr. Stoessel, I have to say that I am amazed and appalled at your unwillingness to characterize the purpose of the Iraqi nuclear program as being one designed to provide them with the capacity to manufacture nuclear weapons in view of what we have heard from so many other people associated with the administration over the course of the last week.

What do you think was the Iraqi purpose in going forward with this program? Was it to give them the capacity to replace oil as a source of energy in their country?

Mr. STOESSEL. Mr. Congressman, I cannot comment on their intentions. As I have indicated, we have had concerns clearly about the Iraqi nuclear program and what their intentions might have been, and I think it is fair to say if they had continued on the course outlined, they would have had the option to produce nuclear weapons.

Mr. SOLARZ. What do you think was the purpose? You have said that we cannot give a definitive answer to that question, but in the world in which we live, we often have to answer questions without being definitively certain as to whether we are right or wrong. Surely we have made an assessment of this.

I have been hearing over and over again from all sorts of people in this town in the last week that in our view, while we might not be able to reach this conclusion with absolute total certainty, that it appeared to us as if, in fact, the purpose of this program was to enable Iraq to be in a position to manufacture nuclear weapons.

Digitized by Google Original from UNIVERSITY OF MICHIGAN

Since the U^{308} is not under safeguards, the material accountancy balance will not show that material has been withdrawn. The plutonium could therefore be accumulated without [illegible] ness. So long as Iraq does not live up to its obligation to submit to irradiating UO^2 or uranium metal in the reactor, you as an inspector have no recourse but to limit your inspection to the declared inventory.

As an inspector you have become aware that as much as [illegible] kilograms of plutonium could be produced each year with the Osirak reactor. Even if only one-third of this amount was produced in the first few years of operation of the reactor through the use of the attendant processing facilities, Iraq could acquire a stockpile of plutonium sufficient to make several atomic bombs.

This is because in spite of having signed the NPT, the most sensitive facilities in the nuclear reactor complex could remain outside of the purview of the IAEA as long as Iraq did not declare that they contained either plutonium or uranium metal, or unirradiated.

During these years when the plutonium stockpile is growing Iraq could master the techniques of fabricating the plutonium configurations required for a nuclear weapon.

NUMBER OF YEARLY INSPECTIONS

Equally disturbing to you as an inspector is the realization that under the present negotiated agreement between the IAEA and Iraq, you will be limited to only three inspections per year, [illegible] spaced at approximately 4-month intervals. Since the hot cells can be emptied of the clandestine uranium target assemblies [illegible] days, you as an inspector face the fact that by the time you [illegible] to verify the declared inventory of fuel elements [illegible] reactor, all evidence of illicit irradiations will be [illegible]

[illegible]

Furthermore, under the present safeguards agreement [illegible] test reactors such as [illegible] lance is made. Such surveillance will permit [illegible] tion of accelerated withdrawal of [illegible] to an inspection.

While it is recognized that such safeguards [illegible] prevent clandestine plutonium production [illegible] serve to reduce the time in which the [illegible] proach to accomplishing [illegible] optimized production of plutonium [illegible] 240 content. This [illegible] construction [illegible] months [illegible]

In contrast [illegible] reactor [illegible] plutonium [illegible] time [illegible] The [illegible] [illegible]

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Just to clear up quickly one matter for the record, Mr. Richter, you claim on page 9 of your statement that, "unlike the light water nuclear power reactors where the IAEA is, TV and photographic surveillance have proven to be 'successful'." But you read it as "unsuccessful."

Mr. RICHTER. Did I? Sorry.

Mr. BINGHAM. It is meant to be successful, as written?

Mr. RICHTER. Yes; very definitely.

PHOTOGRAPHIC SURVEILLANCE

Mr. BINGHAM. Now, on the subject of photographic surveillance, I understood you to have said in your statement, Mr. Houck, that the United States understands that the IAEA is considering measures beyond camera surveillance, and that the use of surveillance cameras is one of several procedures being considered by the IAEA.

But my information is that the agreement for safeguards at Osirak contains no provisions for the use of cameras. Are you aware of that?

Mr. HOUCK. Let me try to clarify, sir, some particular points. The agreement, that is the legal document called the Safeguards Agreement that covers this facility and all other facilities in Iraq, is a standard-type agreement and it does provide for the use of containment and surveillance, one example of which is cameras.

So, the agreement provides for this. What spells out exactly what will be done in the way of inspection activities at a particular facility is a separate document called a Facility Attachment, and that would indeed need to spell out the use of cameras if the agency were to use cameras at the facility.

It is our understanding that that document, the Facility Attachment, has not been completed; was in preparation, and that it was the intent of the IAEA to include in that document procedures they felt necessary for dealing with this problem.

I believe those procedures would have included camera surveillance, but not necessarily be limited to camera surveillance. Since the document does not exist, I cannot say what would be in it.

U.S. POSITION IN IAEA PROCEDURES

Mr. BINGHAM. Mr. Houck, I hope that you would agree that in arguing about what was or was not done in connection with the Osirak facility, the administration should not get itself in a position of defending the procedures followed by IAEA in all respects of arguing that IAEA's procedures are adequate.

Mr. HOUCK. No, sir. Let me make completely clear the statement that I made was that we felt what the IAEA had done in the course of the inspection as described by Mr. Richter, that is, what they had done in the past, was adequate for that particular situation in the past; but this would clearly have to be augmented by other procedures if they were to be effective in the future after the reactor started operating.

I would just further like to make clear that I have not said, and certainly our position is not, that the situation generally or specifically is entirely satisfactory. We have, as I am sure you are aware,

Digitized by Google Original from UNIVERSITY OF MICHIGAN

injury. Taking, for purpose of illustration, the radiation from a gram of radium to be roughly equivalent to that from a gram of fission products, which is a substantial simplification, then the contamination of Baghdad from about 8 micrograms of fission products per square meter could be thought of as approximated by about 8 micrograms of radium per square meter. Since the radioactivity of 1 microgram of radium is 1 microcurie, such contamination would be about 8 microcuries per square meter.

To cause an exposure lethal for half of those exposed, a person would have to receive a whole body exposure of 500 roentgens. A microcurie of radium causes an exposure of 1 microroentgen per hour at a distance of 1 meter from a source. So a contamination equivalent to about 8 microcuries of radium per sq. meter would cause an exposure of about 8 microroentgens per hour. At this level, a person would have to be exposed for many million hours to receive a potentially lethal dose.

Such a level of contamination would be detectable by sensitive instruments, but would not cause a plausible source of lethal exposure.

A longer term risk which is the subject of continuing controversy would be the long term effect of ingesting small amounts of the fallout with possible appearances of cancer in some of those exposed many years later.

The earlier assumptions made in this analysis need some comment.

Assumption 1 - The bomb hit.

The probability of a direct hit on the core is small.

Assumption 2 - The effects.

A near miss could damage the reactor, perhaps break open the pool and cause a loss of cooling water, or jam the reactor controls so that it could not shut down. Either case could present a risk of local contamination if the fuel overheated and ruptured. However, most of the escaping radioactivity would be radioactive gases, iodine and xenon, which would be released comparatively slowly and present no noticeable radiological risk to Baghdad. If the reactor core were broken apart, there would be radioactive debris at the site which could be dangerous until collected and moved to safe containment.

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

The United Nations Charter not only condemns aggression but enjoins the membership to resolve disputes by peaceful means. At the same time, the principle of general customary law regarding the right of self-defense is acknowledged. Although opinions differ regarding the requirement of an "armed attack" for the lawful exercise of the right under Article 51 of the Charter, the weight of opinion and practice seems to be that the right may be claimed and used when there is reasonable cause to believe that the national existence is imperiled or proximately endangered by the implementation of a known and dangerous cause of action.

As such, the exercise of the right is not limited to responding to an armed attack, but also in responding to the use of force not constituting an armed attack. In other words, international law permits the exercise of self-defense not only in the face of actual attack but also against a threatened aggression when the danger is imminent. So much seems to have been accepted by the United States early on in connection with the Caroline controversy. While Secretary Webster's formulation expressed at that time is highly restrictive insofar as the proper circumstance for its exercise, the formulation acknowledges cricumstances other than actual armed attack.

The requirements imposed by customary international law upon the right of self-defense are those of necessity and proportionality. "... imminence of attack of such high degree as to preclude effective resort by the intended victim to non-violent modalities of response has always been regarded as sufficient justification ..." McDougal, "The Soviet Cuban Quarantine and Self-Defense," 57 American Journal of International Law 597, 598 (1963). "... proportionality, ... stipulates that the responding use of the military instrument by the target state be limited in intensity and magnitude to what

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

Egypt invoked the right of self-defense, among other grounds, in justification of restrictions imposed on the passage through the Suez Canal of goods destined for Israel. It claimed that though an armistice agreement had been concluded, a state of belligerency continued to exist. Most members of the Council took the view that with hostilities suspended and no evidence that Israel was preparing an armed attack, the right of self-defense could not be invoked. By a vote of 8 to 0 with three abstentions, the Council adopted a resolution finding that the Egyptian practice "cannot in the prevailing circumstances be justified on the gound that it is necessary for self-defense." Whiteman, 12 Digest of International law at 63-65.

The anticipatory right of self-defense and the correlative consideration of the nature of the armed attack necessary to validate the exercise of the right of self-defense were considered in connection with the Suez intervention of 1956. In the view of one commentator, Israel, the one intervenor which based its actions upon self-defense, met the requirement of necessity but "fell down" in the matter of proportionality. His comments follow:

> "The question came up more sharply in the Suez intervention of 1956. While the United Kingdom and France did not base their actions upon self-defence, *stricto sensu*, but rather upon protection of international rights of passage, national vital interests, and lives and property of nationals, Israel did, quite specifically, base its advance into Egyptian territory upon a right of self-defence. Israel stated that it had entered Egyptian territory to wipe out the fedayeen bases, from which there had been continual—and recent—attacks. These fedayeen raids were occurring with the consent and approval of the Egyptian Government, which had clearly stated on many occasions that its policy was 'to push

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

UNIVERSITY OF MICHIGAN
3 9015 03905 6646

Page 5. last par. The reply points to substantial progress by noting a continued need for improved safeguards with respect to both effectiveness and efficiency. Such a general statement could apply to almost anything. It says nothing about specific goals and the means to attain them.

A notable omission is comment on the tension within the agency between the developing countries on one hand who would prefer the agency to increase funding for technical assistance, and the U.S. which is much less concerned with the technical assistance than it is with safeguards. This tension can substantially affect the future support for IAEA development of safeguards technology.

On the whole the reply gives a useful sketch of interagency coordination and says there is development and progress. It contains no specific suggestions to improve safeguards. Neither does it say much about U.S. participation in international bodies that work for improved safeguards. A reader would never learn from this reply what effect Israel's June attack on Iraq's research reactor has had upon the credibility of safeguards and of U.S. measures to offset the bad effect of that attack.

THE UNIVERSITY OF MICHIGAN

DATE DUE

DEC 19 2001

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Y4:F 76/1:Is 7/3
1017-A

ISRAELI ATTACK ON IRAQI NUCLEAR FACILITIES

"BUHR STORAGE"
[Sep. #97-22]
Univ. of Mich.
B 1,123,224
NOV 23 1981
Reference

HEARINGS

BEFORE THE

SUBCOMMITTEES ON INTERNATIONAL SECURITY AND SCIENTIFIC AFFAIRS

ON

EUROPE AND THE MIDDLE EAST

AND ON

INTERNATIONAL ECONOMIC POLICY AND TRADE

OF THE

COMMITTEE ON FOREIGN AFFAIRS HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

JUNE 17 AND 25, 1981

Printed for the use of the Committee on Foreign Affairs

UNIVERSITY OF MICHIGAN LIBRARIES
NOV 19 1981
DEPOSITED BY THE UNITED STATES OF AMERICA

U.S. GOVERNMENT PRINTING OFFICE
81-844 O WASHINGTON: 1981

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Y4:F 76/1:Is 7/3
1017-A

ISRAELI ATTACK ON IRAQI NUCLEAR FACILITIES

"BUHR STORAGE"
[Sep. #97-22]
Univ. of Mich.
B 1,123,224
NOV 23 1981
Reference

HEARINGS

BEFORE THE

SUBCOMMITTEES ON INTERNATIONAL SECURITY AND SCIENTIFIC AFFAIRS

ON

EUROPE AND THE MIDDLE EAST

AND ON

INTERNATIONAL ECONOMIC POLICY AND TRADE

OF THE

COMMITTEE ON FOREIGN AFFAIRS HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

JUNE 17 AND 25, 1981

Printed for the use of the Committee on Foreign Affairs

UNIVERSITY OF MICHIGAN LIBRARIES
NOV 19 1981
DEPOSITED BY THE UNITED STATES OF AMERICA

U.S. GOVERNMENT PRINTING OFFICE
81-844 O WASHINGTON: 1981

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Y4:F 76/1:Is 7/3
1017-A

ISRAELI ATTACK ON IRAQI NUCLEAR FACILITIES

"BUHR STORAGE"
[Sep. #97-22]
Univ. of Mich.
B 1,123,224
NOV 23 1981
Reference

HEARINGS

BEFORE THE

SUBCOMMITTEES ON INTERNATIONAL SECURITY AND SCIENTIFIC AFFAIRS

ON

EUROPE AND THE MIDDLE EAST

AND ON

INTERNATIONAL ECONOMIC POLICY AND TRADE

OF THE

COMMITTEE ON FOREIGN AFFAIRS HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

JUNE 17 AND 25, 1981

Printed for the use of the Committee on Foreign Affairs

UNIVERSITY OF MICHIGAN LIBRARIES
NOV 19 1981
DEPOSITED BY THE UNITED STATES OF AMERICA

U.S. GOVERNMENT PRINTING OFFICE
81-844 O WASHINGTON: 1981

Digitized by Google
Original from UNIVERSITY OF MICHIGAN