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DATE: OCT 24 2000

JCSM-122-63

MEMORANDUM FOR THE SECRETARY OF DEFENSE

DECLASSIFIED
E.O. 12958, Sec. 3.6
MDD 941029
By STL/PJ Date 12/23/98

Subject: Withdrawal of JUPITER Missiles ~~(S)~~

1. In response to the memorandum by the Assistant Secretary of Defense (ISA), dated 9 January 1963, subject as above, the matter of JUPITER withdrawal and ultimate disposition has been studied by the Joint Chiefs of Staff at some length. The results of these studies are contained in Tab A.

2. In the development of these studies, five courses of action, examined in detail in Tab A, were considered as follows:

a. Other Military Operational Use of the JUPITER Missile. This thought was discarded because the rationale for withdrawal pre-empted the possible use of these missiles in other operational roles.

b. Offer the JUPITER Missiles to US Governmental Agencies, Allies or Industry as a Booster for Test Purposes. Unfortunately, this system is now more obsolete as a space booster than as a military weapon. The THOR system, recently phased out in the United Kingdom, is better suited to this purpose and yet 31 THORs remain in storage excess to any known requirement. It seems extremely unlikely that a user would select a JUPITER with no available production line while THORs and their production facilities remain in being, thereby providing conversion services at considerably less cost.

c. Store the JUPITER Missiles Pending Issuance of Directions for Ultimate Disposition. This will be the result if we withdraw the missiles from Italy and Turkey and store them intact in CONUS or Europe in accordance with the Outline Plan (Tab B), drawn up in

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response to the memorandum referenced in paragraph 1, above. The reasoning of subparagraph 2 b, above, added to the transportation expenses to the United States ($3,254,844) and the annual storage costs thereafter ($575,000), indicate this solution as being excessively expensive - therefore undesirable.

d. Destroy the JUPITER in Place or at Some Suitable Location (Without Reclamation). On the surface this appears to offer many advantages, i.e., demonstrates the disarmament theme of "turning swords to plowshares," reduces the large inventory of unusable missiles and associated ground equipment (AGE), and eliminates the transportation and storage costs. However, this is not reasonable since we are admittedly replacing the JUPITERS with more modern weapons, and would not recover equipment that might reasonably be expected to return recoupment for the capital assets involved.

e. Reclaim Useful and Needed Components and Salvage the Remainder. There are a number of high value components of the JUPITER systems - rocket motors, fueling trailers, and electronic devices - which are usable and may be needed to meet other US requirements. Detailed examination is needed before precise figures can be given, however, it is estimated that roughly 10-20 per cent of the capital assets could be reclaimed. Additionally, the host governments may request permission to purchase some of the salvage material which, when added to the reduced transportation costs involved, could substantially add to any recoupment that might be expected from the disposal of the JUPITERS. The prompt dismantling and removal of the missiles from the launch sites, expeditious withdrawal of the warheads, re-entry vehicles, rocket engines, and initiation of salvage action would amply demonstrate withdrawal.

3. In the development of the various courses of action suggested, as well as the recommended plan (Tab A) and its alternative (Tab B), it is clearly evident that there are requirements for additional funding from OSD which must be made available to the implementing agencies - USCINCEUR, USAF, and Defense Supply Agency. Accordingly, implicit in the submission of this plan and the alternatives proposed is the requirement for additional funding from the directing authority to the agencies delegated action responsibility.

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4. In view of the lack of an identifiable requirement for the JUPITER missile system, the need for a maximum recovery of assets and the desire to limit unnecessary expenditure of additional funds, the Joint Chiefs of Staff recommend that the United States reclaim the useful components and salvage the remainder in place as provided for in subparagraph 2 e, above, and as outlined in Tab A.

5. In the event that non-military considerations preclude approval of the reclamation and salvage operation, the Outline Plan (Tab B) is submitted for your consideration. The removal operation to the United States envisaged under this plan can be completed within 20 days provided OSD funding is made available for modification of additional equipment to permit the expeditious airlift of the missiles. If this funding is not provided, the time factors will increase to 40 days.

6. The plan also contains a provision for storage in Europe; however, this is not recommended if the missiles are to be maintained for possible future use. The provision of proper overseas storage would require expenditure of additional funds with the attendant gold flow implications. The time required for the removal operation for storage in Europe (Burtonwood, England) will also approximate 20 days provided OSD funding is made available for the equipment modification as in preceding paragraph.

7. In any case a decision is required on the ultimate disposition of the JUPITER assets before any particular transportation or storage plan is adopted.

For the Joint Chiefs of Staff:

SIGNED
JOHN M. REYNOLDS
Major General, USAF
Vice Director, Joint Staff

Attachments

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TAB A

DISPOSITION OF JUPITER MISSILES

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TAB A

DISPOSITION OF JUPITER MISSILES

THE PROBLEM

1. To provide OSD/ISA with an outline plan for the "complete disposition" of the JUPITER missiles.

FACTS BEARING ON THE PROBLEM

2. In a memorandum, dated 9 January 1963, the Assistant Secretary of Defense for International Security Affairs requested the Joint Chiefs of Staff to "prepare an outline plan for withdrawal and complete disposition of the JUPITER missile squadrons in Italy and Turkey beginning by 1 April 1963." The memorandum set forth the following guidance:

a. "This plan should provide for procedures that will attract the least possible public attention consistent with expeditious withdrawal."

b. "The plan should take account of the possibility that a number of the missiles may be retained in Europe for European space applications, thereby requiring alternative air transport provisions; and pending arrangements for ultimate disposal, suggestions for storage facilities on the Continent."

c. The plan should be available by 9 February 1963.

3. In a message, dated 19 January 1963, the Joint Chiefs of Staff furnished USCINCEUR rationale for the decision to withdraw the JUPITER missiles from Italy and Turkey. This rationale indicated that the JUPITER missiles are being withdrawn because they are obsolete, vulnerable, and no longer required in view of the adequacy of other more modern weapon systems to perform the task for which the JUPITER's were originally established in NATO.

4. The withdrawal of JUPITER missiles creates 48 surplus IRBM's plus 7 Combat Training Launch vehicles (CTL) in addition to the 68 THOR's (SM-75) which are no longer required for combat operational purposes. Thus far

the Air Force, which accepted responsibility for disposition of the THOR missiles, has identified, in coordination with NASA, possible uses for 37 of the THOR missiles as boosters in the National Space Program. Continuing study is being made to find worthwhile uses for the remaining 31 surplus THOR's.

5. The THOR missile, designed for fixed operation, is considered to be better suited as a booster for space application than the JUPITER, which was designed for mobile operation and was later adapted to fixed operation. However, both missiles require modification to be used for space applications.

6. Funds have not been programmed for the withdrawal or disposal of the JUPITER missiles.

7. The guidance furnished in the cited OSD/ISA memorandum implies that the JUPITER missiles and associated equipment are to be transported and stored in serviceable condition for some possible yet undetermined purpose and use.

ASSUMPTIONS

8. The following assumptions are made in formulating an outline plan for the transportation and temporary storage of the JUPITER missiles in keeping with the implications of the cited OSD/ISA memorandum:

a. The JUPITER missiles will be relieved of target assignments, alert posture, and commitment to NATO on or before the specified 1 April 1963 date to begin dismantling and removal, and title will have reverted to the U.S.

b. The JUPITER missiles are to be dismantled and removed in a single expeditious operation, rather than on a phased basis as applied to the withdrawal plan for the THOR missiles in the United Kingdom.

c. Cost of withdrawal and disposition will be borne by the United States and charged to the agency responsible for ultimate disposal or use of the missiles and associated materiel.

d. The Italian and Turkish governments will actively cooperate in the expeditious dismantling and removal of the missiles from their countries, including work detail, particularly in Italy where the U.S. contingent has been reduced to a small advisory cadre.

e. In view of the current state of relations with France, it is assumed that it would not be desirable to plan for the temporary storage of the missiles in Europe at the NATO depot, Chateauroux. Also, that temporary storage of complete missiles at the support bases [redacted] Italy and [redacted] Turkey) would not demonstrate withdrawal, hence would not be acceptable despite the financial advantages.

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f. Expeditious withdrawal pertains to the warheads and missiles per se, that the removal or disposal of the bulk of associated equipment, spare parts, LOX plants, and other property and material, may be accomplished in an orderly and economical manner over a period of time based upon negotiations and arrangements with the Italian and Turkish governments, These arrangements will encompass the disposition of real estate, installed property, capital equipment, community and base facilities, and withdrawal of U.S. military and contractor personnel.

g. Withdrawal of the missiles and associated equipment rather than disposal in place pre-supposes some other requirement for which the missiles are to be used. Accordingly, transportation and temporary storage plans should provide for maintaining the serviceability of the missiles and associated equipment.

DISCUSSION

9. The decision to withdraw the 48 JUPITER missiles from Italy and Turkey coincident with the withdrawal of the 68 THOR missiles from England aggravates an already difficult disposal problem, in that there is an even greater supply and a lesser demand for IRBM's. After

identifying all possible requirements for the THOR missiles, including modification and use in the National Space Program, there remain 31 THOR missiles excess to any known requirement. Significantly, the THOR missiles are available for the mere cost of transportation. However, the cost of storing the missiles, modifying them for space applications, and conducting such operations are the hidden costs which perhaps account for the limited demand for these missiles despite the cheap acquisition price. Adding the JUPITER missiles, which are less desirable for space application, to the inventory, raises a question of over-supply with the requirement for additional funds to transport and store missiles for which there will be no ultimate requirement nor useful purpose, meanwhile denying a partial return on investment.

10. The problem of determining the proper disposal of the JUPITER assets, requires an examination of all possible uses, however remote, to assure full consideration of the problem and sound judgment in its solution. Within the limited time available, and discussion limited to the Department of Defense for security reasons, an examination, albeit preliminary, has been made.

POSSIBLE SOLUTIONS

11. Other Military Operational Use of the JUPITER Missiles.

The rationale for withdrawal of the JUPITER missiles from Italy and Turkey and from their commitment to NATO practically pre-empts the possible use of these missiles in some other operational role. To do so would undermine the stated reasons for withdrawing the JUPITERS in the first place. Furthermore, to position the JUPITERS and operate them at some other location than Italy and Turkey would require considerable time and expense, comparable to the time and expense involved in establishing the existing operational posture. Hence, the practical factors of time and money would be compelling in any case.

12. Offer the JUPITER Missiles to U.S. Governmental Agencies, Allies, or Industry as a Booster for Test or Other Legitimate Purpose.

The JUPITER missile was used as a booster in the embryonic stage of space technology. Unfortunately, it is now more obsolete as a space booster than as a military weapon. As a matter of fact it is less suitable for this purpose than the THOR missile, which is also on the surplus market for merely the cost of transportation. Of course, it is possible that industry might consider purchase or acceptance of some of these surplus missiles, in which case it is reasonable to expect that it would prefer the THOR over the JUPITER if it were given a choice. But it is more reasonable to expect that industry would not want either one of them for practical reasons: cost of the transportation and storage; lack of trained payload capability compared with newer boosters; questionable reliability considering age and service life; cost of related activities, such as, launch facilities and ranges which would have to be leased or built. The cold facts are quite simply that it is more prudent for industry to buy a boost into space than the booster to conduct one, as done by AT&T with "Telestar," which was boosted by the U.S. Government with a Titan at a charge to AT&T of $3 million.

13. Store the JUPITER Missiles With the Hope that Someone will Think of Something to do With Them.

Any plan to transport and store the JUPITER missiles and associated equipment with expectancy that there will be some legitimate future use for them will cost additional unprogrammed money, which may or may not be recouped depending upon the eventual disposition. If no use is found, the money will be wasted. At the same time, useful components of the missiles and associated equipment could not be used without negating the ultimate intended disposition. Further, if temporary storage is used, and disposition cannot be made within a reasonable time, additional transportation and permanent storage costs must be considered. In such an event, it will be even more abundantly clear then, if not now, that money is being spent with no real expectancy of a financial return or other useful purpose to be realized. In short, this alternative may appear most attractive, but should be recognized as an expedient solution under the pressure for a quick decision. It, in fact, only postpones a hard decision. If it is adopted it will cost the U.S. Treasury more money, and the agency responsible for the disposition will incur the charges, most likely at the expense of some worthwhile programmed effort.

14. Destroy the JUPITER Missiles in Place or at Some Suitable Location.

Perhaps in the interest of disarmament we should not overlook the alternative of making a demonstration of "turning swords into plow shares," by destroying the JUPITER missiles at the launch sites, at the support bases in Italy and Turkey, or at some other appropriate place in Europe, the United States, or at sea. We can only speculate on what the reaction to this would be. To destroy the missiles for this purpose, ostensibly or otherwise, would be almost facetious in light of the rationale given for replacing the JUPITER's with more modern weapons. Moreover, to destroy the missiles before the more modern weapons are in place could raise ugly questions about United States intentions to provide the more modern weapons. Hence, it does not seem reasonable to consider this as a real or announced purpose; yet for practical reasons it might be desirable to destroy the missiles because we have no further use for them and we wish to minimize the cost of transportation and storage and eventual disposal. In this event, we might prefer that they just quietly disappear, i.e., "lost at sea." Certainly this can be done; cost would be minimized; but we would not recoup potentially usable assets unless they were to be removed beforehand. All things considered, mysterious disappearances seem to attract more attention in the long run than straight-forward actions, and the speculations and suspicions created often do more harm than good. Therefore, this alternative does not appear to be a wise choice.

15. Reclaim Useful and Needed Components and Salvage the Remainder.

There are a number of high-value components of the JUPITER system, such as rocket motors, fueling trailers, electonic devices, which are usable and may be needed in other active missile and space programs. Detailed examination is needed before precise figures can be given on the usable and required components; however, it is roughly estimated that 10 to 20 percent of the capital assets could be reclaimed. This might represent a return on the original capital investment exceeding the re-sale value of the complete system, when considering the non-existent demand for the JUPITER system in the market today. In the final analysis, any return on investment would be preferred, at least by the taxpayer, to any further expenditure on a "dead horse." With reference to the transportation of the missiles, there would be less cost involved in shipping components than in shipping complete missiles as provided for in the outline plan. Salvaging of unusable equipment could be accomplished in place, perhaps to some benefit to the Italians and Turks, as well as to the United States, since what was disposed of would not have to be transported. Certainly the prompt dismantling and removal of the missiles from the launch sites, expeditious withdrawal of the warheads, re-entry vehicles, rocket engines, and other components, close down of the LOX plants and initiation of salvage actions should amply demonstrate withdrawal if this need be demonstrated.

CONCLUSION

16. There is no stated and no envisioned economical use for the JUPITER missile system upon termination of its operational military role in NATO.

17. The most worthwhile disposition of the JUPITER assets would be to reclaim useful components for other missile and space programs and salvage the remainder.

18. A decision on the proper disposition of the JUPITER assets should be made before any particular transportation and storage plan is adopted.

RECOMMENDATION

19. Make in place disposal of the JUPITER missiles and associated equipment and supplies now in operational use:

a. Promptly dismantling and removing missiles from operational launch sites.

b. Expeditiously returning warheads to the United States as proposed in the Outline Plan.

c. Identifying usable and needed components of the JUPITER system.

d. Segregating JUPITER assets at the support bases in Italy and Turkey for reclamation and for salvage.

e. Preparing a quantity and price list of material to be salvaged in place for use of interested US agencies or in negotiating sale or transfer to the Italian and Turkish Governments, other NATO nations, or other suitable recipients, and in settlement of accounts with these US agencies or friendly countries.

f. Charging the agency receiving reclaimed components for the cost of transportation and fair market value of these second-hand assets.

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APPENDIX 1 TO TAB A

SM-78 "JUPITER" EQUIPMENT

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APPENDIX 1 TO TAB A

SM-78 "JUPITER" EQUIPMENT

I. INTRODUCTION:

The SM-78 missile system is comprised of SM-78 intermediate range ballistic missiles (IRBM); a launch position; ground support equipment (AGE or GSE); a receiving, inspection and maintenance (RIM) area, and the logisitcs and communications support required to maintain the system. The system is self-sustaining and includes the mobile cpabilities to facilitate transportation to the launch position.

II. MISSILE

A. Power unit (rocket engine, propellant tanks, etc.)

B. Aircraft unit (includes vernier engine guidance and control, etc.)

C. Warhead unit (warhead, nose cone, etc.)

III. Launch Position (Some items duplicated in RIM area)

A. Electrical equipment trailer

B. Diesel fuel trailer

C. 100 KW generator.

D. Power distribution trailer

E. LOX transfer trailer

F. LOX transporter

G. Safety shower unit

H. Nitrogen service trailer

I. Hydro-pneumatic trailer

J. Fuel transporter

K. Erector truck and equipment

L. Guard house

M. Watts theodolite

N. Warhead ice protection shelter

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O. Vertical tail shelter

P. Engine and shelter heater

Q. Crew building

R. Fault isolation trailer

S. 5000-gallon tank trailer

T. Central power distribution hut

U. Launch Control trailer

V. Missile transporter

W. Launcher

X. Launcher trailer

Y. Engine servicing trailer

Z. Cable masts

AA. Cable kit

BB. Azimuth laying equipment

CC. T-290 air radiac

DD. Auxiliary ring assembly

EE. Auxiliary ring accessories:

Long and short cable masts

Valve and auxiliary valve control systems

Fuel and LOX start systems and filling assemblies

LOX replenishing arm

FF. Lightning protection towers

IV: RIM AREA (Same items duplicated at launch position)

A. LOX and LN_2 production facilities (25-ton plants):

- LOX diesel fuel storage tanks

B. LN_2 transporter

C. Vacuum pump

D. Fuel filtering and de-watering equipment

E. Diesel fuel transporter

F. Cart mounted hydraulic servicer

G. Rim pneumatic servicer

H. Dry nitrogen supply assembly

I. T-289 radiac set

J. Test sets

K. Testers

L. Ground support equipment simulators

M. Special purpose cable set

N. Cleaning and purging equipment

O. Power distribution trailer

P. Electrical equipment trailer

Q. Launch control trailer

R. Fault isolation trailer

S. Cable masts

T. 100 KW generators

U. Diesel fuel trailer

V. Nitrogen service trailer

W. LOX transporters

X. Moving equipment:

Cargo trucks

Wrechers

Dollies

Containers

Lifting slings

Kits

Semi-trailers

Y. Work platforms and access ladders

Z. Central power distribution hut

AA. Warehouse and supplies

V. MUNITIONS AREA:

A. Nose cone assembly and maintenance shop

B. Equipment and facilities for testing and maintenance of warhead components

C. Storage igloos

TAB B

OUTLINE PLAN FOR WITHDRAWAL OF JUPITER MISSILES

TAB B

OUTLINE PLAN FOR WITHDRAWAL OF JUPITER MISSILES ~~(S)~~

I. GENERAL.

a. This plan pre-supposes that the instructions for withdrawal of JUPITER missiles from Italy and Turkey will include direction that complete missiles must be airlifted to appropriate storage areas, except for warheads and other custodial elements which will be airlifted separately.

b. Assumptions.

1. Withdrawal of missiles and warheads will be initiated by direction of the Secretary of Defense, beginning by 1 April 1963.

2. Movement will be directed on the basis of attracting the least possible public attention, consistent with expeditious withdrawal. Expeditious withdrawal is defined as the fastest possible air and surface movement, consistent with the quantity of handling equipment and missile transporters available for the task.

3. Missiles are to be moved to a temporary storage site in U.S. or Europe, pending further disposition instructions.

4. No requirement exists to withdraw the associated support equipment on an expedited basis. This will be accomplished on a time-phased schedule using surface transportation in the interest of cost reduction.

II. MISSION.

To redeploy all JUPITER missiles from Italy and Turkey to a temporary storage site, such storage site to be located either in the CONUS or in Europe.

III. TASKS FOR SUBORDINATE UNITS.

a. USCINCEUR will:

1. Provide weapons maintenance personnel and missile handling equipment as indicated in Annex A.

2. Coordinate all necessary supporting arrangements with Italian and Turkish authorities.

3. Provide necessary support personnel and equipment as indicated in Annex A.

4. Provide necessary airlift to support movement of missiles and custodial elements to the designated storage site (s).

b. Director, Defense Supply Agency will:

1. Provide appropriate storage facilities for the missiles.

2. Identify requirements for missiles and AGE.

3. Effect final disposition.

IV. ADMINISTRATION AND LOGISTICS.

a. This plan does not address the problem of disposal of fixed based facilities, unit deactivations nor re-allocation of either missile support or non-missile items of equipment. Most of these factors will depend on whether the decision is made to store the missiles for future use, or dispose of them at once.

b. Transportation details of cost, enroute time, etc., are contained in Annex B.

c. Details of storage site facilities in CONUS and Europe and cost factors are contained in Annex C.

V. COMMAND AND SIGNAL.

Normal.

ANNEX A

I. Details of Preparation for Airlift (From Launch Site to Airhead) and Time Phasing.

The problem is to "stand down" the SM-78 "JUPITER" missiles now on alert in Italy and Turkey. The problem in each country is basically the same, but there are important differences:

A. The number of missiles in Italy (32) is twice as great as in Turkey (16).

B. The launch sites in Italy (10) have all been turned over to the Italian Air Force (IAF) and are under operational control of the Italians. USAF personnel are present only as "custodians" of the warheads, as required by U.S. law. In Turkey, on the other hand, only one of the five sites has been turned over to the Turkish Air Force (TAF), and the remaining four are scheduled to be turned over at such time as the USAF commander there determines that TAF personnel are fully qualified to assume the operational responsibilities. USAF personnel are present in much larger numbers in Turkey than in Italy. It can be assumed then, that preparing the missiles for airlift will be dependent almost completely upon the cooperation of the Italians and their willingness to meet a time schedule as mutually agreed between the U.S. and the host country. Without Italian cooperation and assistance, it might be necessary to bring in and use U.S. personnel. In Turkey, USAF personnel can accomplish most of the work without the assistance of the TAF, but Turkish cooperation will facilitate and expedite accomplishment of the over-all task. In both countries, it is desirable that technicians organized by the weapons system manager, Mobile Air Materiel Area, AFLC, be on hand to advise and assist in the technical aspects of the preparation for and actual airlift of the missiles.

II. In addition to the limitations or handicaps resulting from the dependence of USAF personnel on the Italians and Turks, there are materiel limitations in the form of transporters and dollies (Annex 1). Missiles are moved over larger distances aboard transporters designed for the JUPITER. The transporters are relatively few in number: Four in Italy and three in Turkey. These seven are modified and capable of handling missiles without frequent breakdown or damage to the missile. Seven unmodified transporters could be modified at a cost of approximately $4,000.00 each with several months lead time with Chrysler Corporation. They could, however, be converted for approximately $3,000.00 each for use as aircraft dollies.

III. A missile is transferred from its transporter to an airdraft dolly for loading aboard the aircraft. The dolly cannot then be re-used until the missile has been transferred either to another transporter or to a Bradley Wagon (or other suitable device) for storage. The number of dollies therefore determines the number of aircraft which may be used, since each missile-carrying aircraft must have a dolly available to it. By using the unmodified transporters as dollies, a total of 13 "dollies" would be available. Use of the converted transporters for this purpose could result in more rapid removal of the missiles from Italy and Turkey if an appropriate number of aircraft were allocated to the task.

IV. Some time might be saved by constructing wooden pallets for receiving the missiles from the transporters at the main bases in Italy and Turkey, there to await availability of dollies for loading into the aircraft. The transporters would be thus released to return to a site for pickup of another missile. Approximately one hour is required to transfer the missile from the transporter to the pallet or from the pallet to the dolly. Cost of constructing one of these pallets is estimated at $300. They could be made either locally (if facilities are available) or in the ZI and moved to the overseas locations with the aircraft in the airlift force.

V. Preparation of the missiles for airlift will follow the sequence shown below and consume the time indicated:

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A. Sequence

1. Receipt of message at the launch site to "stand down" the missile.

2. De-erection of the missile. De-mating the warhead.

3. Load the missile on its transporter.

4. Transport the missile to the maintenance area at the main base.

5. Prepare missile for airlift (transfer to aircraft dolly, etc.).

6. Transport missile to airhead and load aboard aircraft.

B. Time

Steps	Italy (NATO I)		Turkey (NATO II)	
1, 2 & 3	8 hours		8 hours	
4	$3\frac{1}{2}$ hours	$11\frac{1}{2}$ hours (cumulative)	4 hours	12 hours (cumulative)
5	3 hours	$14\frac{1}{2}$ hours (cumulative)	3 hours	15 hours (cumulative)
6	3 hours	$17\frac{1}{2}$ hours (cumulative)	3 hours	18 hours (cumulative)

VI. Assuming that all missiles would be ordered to "stand down" simultaneously or within a short period of time, the availability of a missile (after the de-erection process) for loading onto a transporter is not a limiting factor. The combination of the number of sites (10 in Italy and 5 in Turkey) and the number of missiles (3 per site) provides sufficient flexibility for establishing a schedule to obtain maximum utilization of the seven modified transporters. After the first missiles (four in Italy and three in Turkey) were transferred from transporters to dollies at the main base, they would be free to return to a site for pickup of other missiles. Allowing $3\frac{1}{2}$ to 4 hours for the trip from the main base to a site, three hours to load the next missile on the transporter and $3\frac{1}{2}$ to 4 hours to return to the main base, the process would consume 10 to 11 hours. However, the missiles could not be transferred directly to dollies until the dollies had returned with the aircraft which airlifted them to their offloading point. If, however, two dollies (or unmodified transporters) were available for use with each transporter, the second set of missiles would be ready for airlift 10 to 11 hours after the first set, as indicated below:

Return to site - 3½ hours

Onload missile - 3 hours

Return to base - 3½ hours

Transfer to dolly - 3 hours

VII. TAB 3 shows a proposed placement of responsibilities for the preparation of the missiles for removal.

VIII. There are several limiting factors in this operation. Since the missiles can only be loaded aboard the aircraft while mounted on a dolly, the controlling factor is the number of dollies available. If the seven unmodified transporters are converted to dollies, this will provide a total of 13 dollies. Therefore, a maximum of 13 missiles can be in transit at a given time. There are other factors to be considered such as the capability of the weapon teams to de-mate and package warheads for separate air shipment. Since each dolly must complete a round trip to the operational site before the next missile can be loaded, the 5-day round trip time for the C-124 is a controlling factor. On this basis, it is considered that the minimum feasible time for redeployment of all missiles to the CONUS will be approximately 20 days.

TAB I

MISSILE TRANSPORT EQUIPMENT

LOCATION	ACFT LOADING DOLLIES	MISSILE TRANSPORTERS	
		MODIFIED	UNMODIFIED
MOAMA (Mobile Air Materiel Area)	2	0	1
Italy (NATO I)	0	4	1
Turkey (NATO II)	1	3	2
Chrysler Corp Missile Div (Detroit)	0	0	0
Redstone Arsenal	3	0	2
AFMTC (Cape Canaveral)	0	0	1
TOTAL	6	7	7

NOTE:

1. All unmodified missile transporters are repairable and are inspected and repaired prior to each use. Average cost for conversion prior to use as a dolly is estimated at $3,000 per unmodified transporter.

2. While unmodified missile transporters may be used as substitutes for aircraft dollies, they cannot be used as transporters: they are highly susceptible to mechanical breakdown and they damage the missile during normal transit.

3. Cost involved in modifying a trnnsporter is extremely high and involves several months lead time with Chrysler Corporation.

TAB 2

APPROXIMATE DISTANCES BETWEEN LAUNCH POSITIONS AND MAIN BASES

Italy (NATO I)		Turkey (NATO II)	
Launch Position	Distance (Miles)	Launch Position	Distance (Miles)
1	2	1	23
2	18	2	33
3	25	3	40
4	18	4	55
5	35	5	83
6	32		
7	52		
8	46		
9	13		
10	36		

Turkey (NATO II):
Average distance - 46.8 miles (Approx)
Average transporter travel time - 4 hrs

Italy (NATO I):
Average distance - 27.7 miles (Approx)

Average transporter travel time -3½ hours

NOTE:

While the distances do not appear to be great, the poor road conditions (surface, width, number and sharpness of curves, etc.) the ruggedness of the terrain and the weather increase travel time considerably.

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TAB 3

ACTION/FUNCTION/RESPONSIBILITY	ITALY (NATO I)	TURKEY (NATO II)
1. Act as U.S. (DOD) monitoring agency anc coordinate with host Air Force on working arrangements.	MAAG	USCINCEUR and/or JUSMAAT
2. Supervise preparation of missile for removal; coordinate with on-site host Air Force personnel.	Missile Advisory Br (MMAB) of MAAG	USCINCEUR
3. De-erection of missile and preperation for removal	MAAG/IAF	USCINCEUR and TAF
4. Request additional assistance, if necessary from U.S. Logistics Office at Chateauroux (France) or from AFLC, if beyond theater capability.	MAAG	JUSMMAT
5. Property accounting and preparation of shipping documents.	MAAG	JUSMMAT
6. Technical direction on packaging preservation, etc.	DSA/MOAMA (Team of technicians on site, if necessary).	DSA/MOAMA (Team of technicians on site if necessary)
7. Repair unmodified transporters for use as aircraft dollies	DSA/MOAMA (on site if necessary)	DSA/MOAMA (on site if necessary)
8. Pickup and delivery of dollies and unmodified transporters	DSA/MOAMA	DSA/MOAMA

Downgraded ~~to CONFIDENTIAL~~

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ANNEX "B"

DETAILS

I. GENERAL.

The movement of the missiles, AGE and supplies will be accomplished in the most expeditious and economical manner consistent with the guidance provided by the appropriate authority at the time the evacuation plan is to be implemented. Initial planning provides for the evacuation of the missile itself by air and the related equipment by surface transportation.

A. Specifics. While USCINCEUR is tasked with overall responsibility for accomplishing the planned withdrawal, MATS and MSTS may be used in accordance with the following:

1. Air movement will be accomplished by MATS.

2. Cost of movement will be computed on basis of MATS common use tariff (AFR 76-11) with reimbursement to MATS chargeable to directing agency.

3. MATS will move missile from point of origin direct to storage site in CONUS or Europe.

4. MATS will utilize C-124 aircraft for this mission.

5. MSTS will be utilized to return supporting equipment and supplies to the Z.I., or to points in Europe.

6. If U.K. is utilized for storage of the equipment and supplies, MSTS will utilize Liverpool for the operation to the extent feasible.

II. REQUIREMENTS.

a. Airlift.

MATS will provide C-124 aircraft to evacuate 48 missiles to CONUS or European bases. Thirty-two missiles will be moved from Italy and 16 from Turkey.

b. Surface Movement. The following estimated tonnage will be required to be moved:

1. MSTS - From Italy - 34,298 M/Ts

- From Turkey - 17,149 M/Ts

2. Port Workload:

Ex Italy	-	CONUS/U.K.	7,140 L/Ts
Ex Turkey	-	CONUS/U.K.	3,596 L/Ts

3. Rail/Highway U.S./U.K.

Ex Italy - 7,140 L/Ts

Ex Turkey - 3,596 L/Ts

III. COST.

a. Airlift (AFR 76-11)

Italy	-	CONUS	$510,000	
Turkey	-	CONUS	320,000	$830,000
Italy	-	U.K.	$96,000	
Turkey	-	U.K.	80,000	$176,000

b. Surface - includes port handling, water and overland movements.

Italy	-	CONUS	$1,833,334	
Turkey	-	CONUS	916,666	$2,750,000
Italy	-	U.K.	$690,608	
Turkey	-	U.K.	407,060	$1,097,668

c. Total Cost

Italy/Turkey to U.S. $3,580,000

Italy/Turkey to U.K. $1,273,668

IV. TIME PHASING OF AIRLIFT FOR MISSILES ONLY.

a. This discussion is based on round trip flying times, since the missile dolly is the controlling factor. After the first 13 missiles are out-loaded, no more can depart until the first dolly has been returned.

b. Round trip flying time via C-124 from [redacted] Turkey to Detroit, Michigan is [redacted] Due to the time and distances involved, normal procedures call for two 15 hour crew rest stops each way on this trip. This results in a total round trip elapsed time of [redacted] or

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slightly over five days. The shorter distance from Italy to the CONUS results in round trip time of slightly less than five days. This time can be reduced to approximately three and one-half days by using stage crews and thereby reducing ground time at each enroute stop to two hours. Although this would make the available missile dollies more productive from the standpoint of time, it is doubtful whether the other limiting factors such as warhead de-mating crews, missile transporters, etc., could support a faster turn-around rate.

c. If the 13 missile dollies are the limiting factor, then it will be necessary to transport 3.69 missiles per dolly. On the basis of 5± days per cycle, the total time required will be 18 to 20 days.

d. Although the enroute flying time from Italy/Turkey to Burtonwood England is considerably less, the rate of movement here will be limited by the productivity rate of the warhead de-mating crews and associated missile handling equipment. It is considered doubtful whether the 20 day figure cited for movement to the CONUS can be appreciably reduced due to these factors.

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ANNEX C

STORAGE SITE CONSIDERATIONS AND COST FACTORS

I. GENERAL.

In the attempt to choose an appropriate temporary storage site for the JUPITER missiles, several factors must be considered. Among these are available space, cost, proposed future use and status to be maintained while in storage.

2. Based on available space, two CONUS locations and one in Europe were chosen for consideration as requested by DOD. The table below depicts the various factors as they apply to each location.

a.

	CONUS		Overseas
	Detroit (Chrysler Plant)	Mira Loma	Burtonwood
(1) Space Available (Missiles & peculiar spares and AGE)	Yes	Yes	Yes
(2) Maintenance Capability	Yes	No	No
(3) How accomplished a. Storage b. Maintenance	Contract Contract	In-House Contract	In-House Contract
(4) Cost of: a. Storage b. Maintenance	($4,000 per yr. per missile)	Less than Chrysler	Less than CONUS
(5) Cost to remove from storage for operational use.	$38,000 per missile	More than Chrysler	More than Chrysler
(6) Storage racks (wood)	$300 per rack per missile	$300 per rack per missile	$300 per rack per missile
(7) Cost of storing & Maintenance of peculiar equipment & spares	$20,000 per yr. support package for 3 missiles	Approx. same as Chrysler	Approx. same as Chrysler
(8) Availability of Clean Rooms (dust free for guidance maintenance)	Yes	No	No

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(9) * Cost of additional aircraft loading dollies			
a. New Procurement			
1. Lead time	30 days after award	-	-
2. Cost	$4000 each	-	-
b. Modify transporters to dollies			
1. Lead time	30 days after award	-	-
2. Cost	$3000 each	-	-

* Main limiting factor for quick removal of missiles (only 6 available world wide)

(10) First acceptance	5 days after initiation of storage rack construction	Same	Same
(11) Amount of time to contract			
a. Sole source (if urgent)	30 days to award		
b. Bid type (if not urgent)	120 days to award		

b. From the above table it can be seen that the annual storage bill for 48 missiles, support equipment and spares will approximate $575,000. If missiles are to be withdrawn from storage for operational use, the cost will be $38,000 each.

c. Storage in the above locations are based on the following criteria:

(1) If missiles are to be used in the future, they should be maintained as a package at Chrysler.

(2) If the missiles are not be used, store at Mira Loma or Burtonwood with acceptance of ultimate destruction by corrosive and other adverse effects.