HISTORY OF PHASE OUT OF THE ATLAS E AND F AND TITAN I WEAPON SYSTEMS

AFLC/SBAMA ICBM DEACTIVATION TASK FORCE

VOL. I

SBAMA SPECIAL STUDY NO. 12

RCS: AU-D5

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C H R O N O L O G Y

1964

28 Sep	General Gerrity created an Air Staff Study Group to study and evaluate potential Air Force uses for phased out ICBM facilities.
16 Nov	Air Staff Study Group recommended 59 missile sites be placed in preservation while potential Air Force uses were being evaluated.
19 Nov	DOD announced (in the form of a news release) that Atlas "E" and "F" and Titan I missile installations were to be inactivated. The reason given for this DOD decision was that the Atlas "E", "F" and Titan I had served their purpose as first generation missiles and were relatively vulnerable and slow reacting weapons.
20 Nov	USAF Message AFSPB 92162 directed that the Atlas E & F forces were to be programmed to phase out during the last half of Fiscal Year 1965.
21 Nov	USAF Message AFSPDB 92163 directed that the Titan I forces were to be programmed to phase out during the last half of Fiscal Year 1965.
24/25 Nov	USAF Chief of Staff met with SAC, AFLC and ATC to discuss command responsibilities for disposal and degree of security required at missile sites.
8 Dec	USAF Message AFCVC 96605 provided the basic USAF policy for the Missile Deactivation Program. This directive established basic responsibilities for each Air Force command including assignment of EMR for Deactivation to AFLC. In addition, guidance was provided in all areas of deactivation.

16 Dec — AFLC and SAC representatives met at Offutt AFB Nebr and developed a "USAF Plan of Action for the Phase Out and Disposition of the Atlas 'E' and 'F' and Titan I."

17 Dec — USAF, AFLC, and SAC representatives met in Washington D. C. to discuss retention of certain missile sites, funding, airlift of Atlas missiles and storage, and to present a draft of the "USAF Plan of Action".

18 Dec — AFLC Message MCGM-86545. General Mundell, Commander of AFLC, urged all AMA's to accomplish Inventory Manager (IM) screening of available assets before general AF, DOD and GSA screening began. He also advised the AMA's that a Site Deactivation Task Force was being established at each Atlas and Titan I base to manage the phase out.

19/21 Dec — SBAMA Message SBG-00024, SAC Message DPLC-117924 recommended airlift be used to transport missiles; AFLC Message MCGM-86797 concurred and so advised USAF.

24 Dec — AFLC MCGM-87595. General Mundell directed SBAMA to proceed with arrangements for the air movement of spare Atlas missiles from SAC bases to Norton AFB for storage. General Mundell also advised that all Atlas and Titan I's were to be stored at Norton AFB and Mira Loma AFS.

28 Dec — USAF Message AFSPDB-73328 directed that plans be made for surface transportation of Atlas and Titan I missiles with limited amount of airlift.

29 Dec — AFLC Message NCO-88050. General Mundell advised that AFLC would support the Booster Program organically.

29/30 Dec — AFLC/SAC/ATC concluded a final review of the "USAF Plan of Action" at Hq AFLC prior to forwarding to Hq USAF for approval.

H-SBAMA Special Study-12, Chronology

31 Dec — AFLC Message MCS-88653 directed the AMA's to establish local missile deactivation task groups to assure comprehensive screening of assets to the maximum extent possible for other programmed requirements.

1965

4 Jan — Hq AFLC forwarded to the AMA's for immediate implementation the "AFLC Supply and Disposal Plan". This plan was developed by SBAMA DTAF personnel.

5 Jan — SBAMA Message SBSP-78508 established a schedule for transporting missiles.

6 Jan — AFLC Message MCGM-50004 advised that SBAMA had started over-the-road commercial transportation of the Titan I missile.

6 Jan — USAF Message AFSTPCB-74518 directed that airlift was to be cancelled except for missiles removed from Plattsburgh, Fairchild, and Larson sites. Also the MATS schedule was to be cancelled.

7 Jan — SBAMA Message SBGMA-50005 reported that two (2) Atlas "E" and five (5) Atlas "F" missiles had been airlifted to Norton AFB for storage.

8 Jan — USAF Message AFSTP-75548 authorized substitution of Warren and Forbes for Plattsburgh and Fairchild for airlift of missiles as requested by AFLC Message MCGM-066.

8 Jan — AFLC letter established ICBM DTAF at Hq AFLC with an Operations Office at Norton AFB for carrying out the actual operations of deactivation.

9 Jan — SAC Message DPLCM-00188 established a new pick-up schedule for missiles.

15 Jan — Directorate of Civil Engineering, Hq USAF, advised all commands that USAF would control distribution of all diesel generators 100KW and larger.

H-SBAMA Special Study-12, Chronology

15 Jan — USAF Message AFSPD-77227 directed preservation of all sites except Larson, Schilling, Lincoln, Fairchild, Forbes, and Warren for an indefinite period.

15 Jan — Secretary of Defense approved funds to cover storage, disposal, and preservation of deactivated missiles and sites.

19 Jan — AFLC Message MCGM-13305 recommended total asset screening and preservation of selected sites with release of material on a site-by-site basis.

22 Jan — AFLC and SAC signed a memorandum of agreement to establish the organization and responsibilities of the AFLC, SDTAF on each base, and to delineate the SAC host base functions.

22 Jan — Directors of Civil Engineering, USAF, announced that Hq USAF would monitor 100 KW generators and Air Conditioners of 100 tons or larger.

22 Jan — USAF Auditor General requested the Resident Auditor at each host base of the requirement to plan for and execute terminal audits of the deactivated missile sites.

22 Jan — SBAMA Office of Information announced Atlas and Titan I missiles had begun arriving at Norton AFB. Each missile movement was carefully pre-planned and monitored in the Program Management Center at Norton where status boards provided information throughout each missile trip.

26 Jan — AFLC and GSA recommended brochure screening of all assets. DSA/DLSC was to print and distribute the brochures. These brochures were to be prepared from data developed by SBAMA and SAC in accordance with 22 Jan 65 USAF Phase Out and Disposition Plan.

1 Feb — SBAMA letter. Deputy Commander DTAF outlined proposal for maximizing use of missile excesses. Proposal consisted of (1) complete inventory of systems and components, (2) complete description (3) complete cataloging in

and publication of brochures, (4) Presidential directive to screen for all Federal Agency applications, (5) Complete site turnover to GSA upon removal of save-list items and (6) complete administration by GSA of all residual equipment, structures, and real estate.

4 Feb — USAF Message AFSPDB-82885 directed AFLC to study possibility of using Atlas "F" sites for storage of surplus Minuteman missiles.

15/16 Feb — Representatives from DSA, SBAMA, AFLC, DLSC, GSA and Hq USAF met at Battle Creek, Michigan to discuss screening, sites in an indefinite hold status, GSA representatives at SBAMA, disposition of large generators and air conditioners, GSA's desire to run a national advertisement offering excess missile sites for sale to general public and editing of instructions to appear in brochures.

17 Feb — SBAMA Message SBGMA-51035 outlined storages and maintenance procedures at Mira Loma AFS and Norton AFB.

17 Feb — USAF Message AFRDDF-86766 directed the inclusion of Atlas E and F facilities at Vandenberg AFB in the phase-out program.

24 Feb — SBAMA SBGM letter to Hq AFLC DTAF advised that, by careful transportation planning and constant vigilance over movement of missiles, transportation costs would not exceed SBAMA estimates previously furnished on 4 Feb 1965.

24 Feb — OOAMA Message OONC-10691 stated that an engineering feasibility study on storing Minuteman missiles at Atlas F Missile sites to be conducted organically. The study was to start 1 April 1965.

25 Feb — AFLC Message MCGM-21444 stated that Engineering feasibility study to be conducted at VAFB on storing Minuteman missiles in Atlas F sites was to be completed 1 Jul 65.

25 Feb — SAC Message DM417876 advised that SAC was holding in abeyance plans for prototype dismantling of a site.

28 Feb — FUNDING. As of this date the status of the FY 1965 funds program was as follows:

(65)

Category	Program	Committed	% Committed
Deactivation & Storage	$303,300	$7,495	2.5

28 Feb — FUNDING. Funds required for fiscal 1966 were listed as follows:

(66)

Deactivation and storage	$429,000
Transportation	None
Travel & Per Diem	258,740
Grand Total	$687,740

(DTAF Working Paper, 28 Feb 1965, Subj: FY 66 Fund Prog. Recap).

4 Mar — PRESERVATION PROTOTYPE, MISSILE SITE RETENTION. RE-UTILIZATION OF FACILITIES AND EQUIPMENT.

(68) Colonel Edward M. Jacquet, Directorate of Production and programming, reported on a Norton briefing on preservation prototype results relative to the missile complex retention program. A Titan I complex at Beale AFB and two Atlas F complexes at Altus AFB had been readied from an engineering standpoint and the three complexes had actually been placed in a preservation or "mothball" status. The experience indicated that cost to preserve a Titan I complex would run approximately $17,000; to preserve an Atlas complex would run about $6,000. Cost per month for commercial electricity would be substantially lower than for diesel generated power. Commercial electricity would be needed for retention and care-taking. It was estimated that a professional group of about 25 men could place a complex in preservation in about five days. Caretaker personnel requirements

after preservation would be about 12 men for a Titan I complex and about 14 for an Atlas F complex. (Memo for Record, Col. Jacquet, 4 Mar 65, Subj: Preservation of Complexes.)

4 Mar — TRANSPORTATION OF MISSILES. Col. Jacquet reported that Titan transtainers were too difficult to maintain and that contractor flatbeds were being used to transport Titan I's. Special supports had been fabricated by SBAMA to hold the Titans on the commercial flatbed vehicles. (Memo for Record, Col. Jacquet, 4 Mar 65, Subj: Missile Storage).

5 Mar — DISPOSITION OF FACILITIES. GSA ran a missile site advertisement in the Wall Street Journal. The intent was to engender early public interest in the huge missile site disposal program, not to solicit bids for public sale of those facilities. GSA could not solicit bids or effect the disposal or public sale of the facilities until they were released by the Air Force. It was estimated that GSA would be given that release by November 1965. (Ltr. D/CE, USAF, to Secy. AF, 30 Mar 65, Subj: Disposal of Excess Real Estate).

8 Mar — RE-UTILIZATION OF FACILITIES. The AFLC Commander advised the Chief of Staff, USAF, that he was concerned about the indefinite retention of the 89 launch facilities directed by USAF. (71) This retention was meant to provide time for a thorough investigation as to any possible Air Force use. The Commander felt that adequate time would be available prior to 1 July 1965 to make such evaluation, especially in view of the studies already made for that purpose in Headquarters USAF. He said that to delay the decision beyond 1 July would result in site preservation costs and the need for re-establishing another effort for their disposal. He said it would seem appropriate to proceed toward disposal of all assets for which there was no established need immediately following the completion of the screening process on 31 Jul 65.

(Ltr., Gen. Bradley to Gen. J. P. McConnell, C/S, USAF, 8 Mar 65, Subj: Deactivation of Atlas E, F, and Titan I Missiles).

circa 9 Mar 65 (72) SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB. Lewis C. Tuttle, Deputy Assistant Commissioner for Personal Property, GSA, reported to General Mundell that GSA people felt (as did SAC) that advantages would accrue to the Government if the Air Force would remove equipment in a prototyping effort from one of the Atlas F holes at Lincoln. It was his view that returns from sale of property could be increased to some degree. Further, the prototyping effort would give a basis for estimating the cost of dismantling, which was an important consideration to government agencies. General Mundell passed this information on to SAC on 10 March. (Msg., MCGM24503, AFLC to SAC, 10 Mar 65).

10 Mar (73) SCREENING ASSETS AGAINST REQUIREMENTS. General Mundell advised Hq. USAF that the Defense Logistics Services Center (DLSC) was currently in the process of publishing illustrated brochures of equipment remaining at Atlas and Titan I missile sites. Nine volumes were to be published and distributed --three for each type of site. They would cover real property installed equipment, aeronautical ground equipment (mobile and fixed), and communications-electronics-meteorological equipment. General Mundell recommended that USAF request DOD to require the construction activities of the Army, Navy, and Air Force to certify that the brochures had been screened against their construction programs to insure maximum utilization of excess equipment in construction. General Mundell said that construction agencies, such as the Office of the Air Force Civil Engineer, were the only activities with central knowledge of approved construction programs. (Ltr, Comdr. DTAF, to USAF (AFSPD), 10 Mar 65, Subj.: Util. of Excess Missile Equip.)

10 Mar — RE-UTILIZATION AND DISPOSITION OF FACILITIES. The Director of Production and Programming, advised AFLC that the Air Force could properly make a decision in June as to possible retention of sites for Air Force utilization. By that time the Air Force would have explored, comprehensively, all avenues of potential uses of the sites.* In the event no firm Air Force missions had been identified for given sites, disposal action would be initiated.

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* By 10 March an Air Staff Study Group had evaluated more than 200 potential uses for Atlas F and Titan I launch sites. It appeared that few sites could be converted, economically or feasibly, to immediate or future Air Force uses. USAF felt that every possible use had to be explored in depth, however, because the Atlas F and Titan I facilities represented a "brick and mortar" replacement value of more than $700 million.

10 Mar (72) — SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB. General Mundell advised SAC that he concurred in that command's proposal to remove equipment from an Atlas F hole while "blue suit" capability was available. He cautioned, however, that such removal should not result in undue exposure of equipment to the elements. He said at least the bulk of equipment removed should be placed under protection in a suitable building and that provisions should be made for examination of the equipment by potential buyers. General Mundell advised SAC that he had requested Colonel Hamrick and his staff at Norton to cooperate in working out details. (Msg. 24503, AFLC to SAC, 10 Mar 65)

12 Mar (75) — SCREENING ASSETS AGAINST REQUIREMENTS. General Mundell briefed the AFLC Commanders' Conference on the phase out of the Atlas E and F and Titan I. He emphasized the importance of screening the assets of the phasing out missile sites. He said that, basically, there were two separate screening periods. Each AMA was currently completing the first phase --determining Air Force programmed operational requirements.

The second phase was to consist of selections from pictorial DOD brochures. The brochures would list and describe excess aeronautical ground equipment, communications-electronics-meteorological equipment, and real property installed equipment. The Air Force, DOD, and other government agencies would be screening the brochures simultaneously. Property would be allocated to satisfy known requirements in order of precedence--with the Air Force first. In making allocations, requirements for a functional unit--for instance, a missile auxiliary hydraulics subsystem--were to be given preference over requirements for separate components, regardless of the source of the request. By so doing, the value of a complete system would not be destroyed for the sake of obtaining utilization of some of its components. General Mundell asked each commander to insure that screening of the SBAMA lists and the brochures was accomplished by the inventory managers and the AMA Missile Deactivation Task Group for the purpose of satisfying all known requirements for property available from the missile sites. He advised the commanders that their review should also include a determination as to whether any of the excess equipment could be modified to satisfy other equipment requirements against which they were planning procurement action. He said that personal visits to the sites were encouraged and that quite often they were the only means of insuring that the property would satisfy a particular need. He said such visits could be arranged by contacting the Program Management Center, Norton AFB. (Presentation, Maj. Gen. L. L. Mundell, to AFLC Commanders' Conf. 12 Mar 1965, Subj: Atlas E/F and Titan I).

15 Mar (76) <u>SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB.</u> SAC advised the Second Air Force, Barksdale Air Force Base, Louisiana, that SAC and AFLC had agreed to dismantle one Atlas F silo at Lincoln AFB, Nebraska, and to place the aeronautical ground and real property installed equipments on display. The purpose of the

removal was to provide potential users of the equipment with a sequence of systems removal, types of skills required, and manhour costs. SAC had agreed to provide manpower and funds required for the dismantlement, transportation to base, and display of equipment. All equipment would remain in the custody of SAC until disposal action was taken. AFLC had agreed to furnish technical direction and guidance, technicians, procurement specialists, and all documentation required. (Msg. DDM/DDE 24316, SAC, to 2d AF, 15 Mar 65, Subj: Added Effort-Dismantlement of Atlas F Silo.)

15 Mar (76) SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB. PROCEDURES. MANPOWER. SAC message DDM/DDE 24316, Part II, requested that a meeting of Hq SAC, Second Air Force, and SBAMA personnel be held at Lincoln, starting 17 March 1965, to prepare the proposed operations plan, review SBAMA dismantlement procedures, establish organization of the dismantlement task force, decide on personnel requirements, select a site to be dismantled, and pick a display area, starting date, and so forth. Once made, the plan would be forwarded to Hq USAF for approval and coordination with GSA. SAC estimated that the dismantling task would take about two months, using a full time force of 75 to 100 people on a two-shift day, five-day-week basis. Personnel would be assigned to the task force from available SAC resources. (Ibid).

15 Mar (77) SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB, PROCEDURES. AFLC sent copies of the Atlas E and F and Titan I site preservation procedures to Headquarters USAF for review. These procedures covered, among other things, the environmental controls which were to be used at the various sites during the storage period. They had been prototyped by a joint AFLC--SAC team in conjunction with the professional corrosion control personnel of MOAMA, communications personnel from GEEIA, and various contractors. Those procedures had been disseminated to the field and were being used by SAC in

preserving the missile sites and placing them in a storage status. The Atlas E Extended Preservation Procedures provided for placing the entire site in a storage configuration. The Atlas F Extended Storage/Preservation (Plan 1A) Procedure was developed primarily for sites that were being operated with diesel generators as a source of electrical energy. The Atlas F Indefinite Storage/Preservation (Plan 1B) Procedure was to be used for sites where commercial power was available. It was planned that all Atlas F sites would eventually be on commercial power and then all would be placed in indefinite storage and preservation in accordance with Plan 1B. The Titan I Initial Preservation Procedure provided for placing the sites in extended preservation, using either diesel generators or commercial power. Current planning was that all Titan I sites would eventually be connected with commercial power. The procedure provided for switching from diesel generated power to commercial power. Hq USAF was requested to forward to SBAMA any comments or recommendations it might have. (Ltr. Comdr. DTAF, to USAF (AFCVC), 15 Mar 65, Subj: Atlas "F", and Titan I Preservation Procedures).

18 Mar (79) RE-UTILIZATION OF FACILITIES, MINUTEMAN STORAGE. The Ogden Air Materiel Area notified Headquarters DTAF of the start of an engineering study on storage of Minuteman missiles in Atlas F silos. (OOAMA Msg OONC10731, 18 Mar 65).

18 Mar RE-UTILIZATION OF FACILITIES, MINUTEMAN STORAGE. AFLC message MCGM-26303 advised USAF that OOAMA had started the study on storage of Minuteman missiles in Atlas F silos. The project was to be completed by 1 June 1965. (DTAF Chron.)

19 Mar (81) DIESEL GENERATORS. AIR CONDITIONERS. The Director of Production and Programming advised General Mundell that forecasts indicated that the Air Force had need for all diesel

generators of 100 kw and greater and refrigeration compressors of 100 tons and larger that would become surplus from ICBM missile complexes. He said there was an immediate need for generators to fill oversea commitments; and for the next five years, military construction programs would require many others. Large amounts of Air Force money could be saved by the careful test, removal, storage, and re-utilization of these surplus generators. He listed detailed procedures for disposing of the generators and refrigerator compressors. (Ltr. Maj. Gen. H. E. Goldsworthy, USAF to Gen. Mundell, 19 Mar 65, Subj: Disposition Procedures, Generators and Air Conditioners).

22 Mar DIESEL GENERATORS. PROCEDURES. MANPOWER. Hq USAF stated that the disposition of surplus diesels (from missile sites) was currently in a state of transition. Headquarters USAF was to monitor the technical action. AFLC was to handle preservation, removal, and shipments. Funding for those actions was to be in accordance with the USAF Plan of Action for Phase Out and Disposition of Atlas E and F and Titan I, dated 20 January 1965. Two hundred SAC military personnel had been made available to the AFLC ICBM Deactivation Task Force for use at each Atlas main base. Likewise, 150 had been made available to the task force for use at each Titan I main base. Hq USAF presumed that a certain number in each of those groupings were civil engineer power production personnel and would be used, as required, by the local task force commander. General Mundell was authorized to (1) use blue suit power production personnel to serve as the operation and maintenance force on "in-place" tests; *and (2) use blue suit capability for the tear-down and removal of the units after the "in-place" tests. (Msg. AFOCE-96553, USAF to SAC and AFLC, 22 Mar 65).

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* Such tests would be supervised by a fully qualified field technician or engineer provided by Hq. USAF.

22 Mar — RE-UTILIZATION OF FACILITIES, MINUTEMAN STORAGE. AFLC requested the Ogden Air Materiel Area to expedite the study on the feasibility of storing Minuteman missiles in Atlas F Silos. (AFLC Msg. MCGM-26941, 22 Mar 65.)

25 Mar — RE-UTILIZATION OF FACILITIES, MINUTEMAN STORAGE OOAMA message 22484 replied to AFLC Message MCGM-26941, stating that 15 May would be the completion date for the study on feasibility of storing Minuteman missiles in Atlas F silos. (DTAF Chron.)

25 Mar (83) — DIESEL GENERATORS. AIR CONDITIONERS. The DTAF Commander advised the Norton office that AFLC accepted Major General H. H. Goldsworthy's letter of 19 March on "Disposition Procedures, Generators and Air Conditioners" as directive in nature (see item 203). General Mundell and Colonel G. H. Goddard, AFLC Civil Engineer, were to meet with General Goldsworthy and Major General R. H. Curtin, USAF Civil Engineer, on 31 March to discuss actions to be taken to carry out the directive. (Msg. MCGM-28183, AFLC to SBAMA (SBGM), 25 Mar 65).

26 Mar — DIESEL GENERATORS. SAC Message DDE-29096 recommended to the USAF Civil Engineer that diesel generators not be tested and rehabilitated. For one thing, the equipment was considered to be in good condition. For another, SAC personnel were needed for more urgent assignments. (DTAF Chron.)

30 Mar (85) — DISPOSITION OF EQUIPMENT, ORGANIZATION AND MANAGEMENT. DISMANTLEMENT. The DTAF Commander requested USAF approval of a proposal for dismantlement and disposal of Atlas E and F and Titan I launch complexes. This proposal recommended that the dismantlement and disposal tasks be accomplished contractually by the Defense Supply Agency. Headquarters AFLC had previously determined that the magnitude of the tasks exceeded AFLC's organic capability in view of the policy of applying available resources toward

8 Apr (91) DIESEL GENERATORS. DTAF reported that there were 270 diesel generators installed in Atlas and Titan I sites and at Vandenberg AFB which were of concern to the task force. Hq. USAF had repeatedly stated that there was a requirement within the Air Force, and certainly within the DOD, for all of those generators. Hq. USAF had directed that each of the generators was to be tested in place to determine its condition. Based upon that determination, each generator was to be identified as necessary to fulfill a specific need and shipping instructions were to be issued. Such instructions could include the temporary holding of the generators at a designated storage location prior to actual shipment to the point of intended usage. If the generator was not in serviceable condition, the USAF Civil Engineer could direct the rehabilitation of the generator to make it serviceable. AFLC was not responsible for performing IM (inventory Manager) responsibilities for large diesel generators and spares. That responsibility was retained in Headquarters USAF. Accordingly, instructions as to generator requirements, shipments, spare parts, and technical instructions were to be issued by Hq USAF. This did not preclude action by the task force in recommending for USAF approval procedures relating to diesel spares, engine testing, and so forth. It was necessary to establish a program with SAC for testing the diesel generators. By agreement with representatives of the Directorate of Civil Engineering USAF, the prototyping of the tests for generators was to be accomplished at Lincoln for Atlas F, at Forbes for Atlas E, and at Larson for Titan I. The following schedule was to apply: (1) Preparation of procedures at Lincoln and Forbes AFB's during the week of 12 April 1965. (2) Verification of the procedures at Lincoln and Forbes during the week of 26 April. (3) Preparation and verification of Titan I site procedures at Larson during May 1965. (Ibid).

8 Apr (91) SCREENING ASSETS AGAINST REQUIREMENTS. DTAF reported that the screening of property remaining at the bases servicing the missile sites would be done concurrently by all government agencies by means of illustrated brochures. The brochures were being published by the Defense Logistics Services Center. Four volumes were to be published in June. Agencies were to screen the brochures, inspect the property as necessary, and establish their requirements by the automatic release date of 31 July 1965. The task force would assure accuracy and completeness of information contained in the brochures. Quality control would be applied to the preparation and processing of the data sheets and the final printing of the brochures. (Ibid.)

14-16 Apr 65 (95) DIESEL GENERATORS, DISPOSITION OF FACILITIES AND EQUIPMENT, PLATTSBURGH SITES 3 AND 9. A meeting was held at SBAMA to consider (1) Titan I diesel removal, (2) environmental control of sites, (3) Plattsburgh sites #3 and #9, (4) diesel testing, and (5) brochures. On diesel testing, the following information was developed: A previous meeting at Forbes and Lincoln to work out testing procedures had clearly indicated that testing and inspection could be accomplished with very little contractor support. At the current meeting it was agreed that testing should be accomplished as soon as possible to insure the best blue suit support. Testing would have to be finished prior to 31 July to prevent any interference with equipment removal from the sites. It was further agreed that a plan would be developed by SAC and SBAMA covering responsibilities of the two for supporting the testing program. Preliminary examination of the Atlas F site procedures indicated that testing could start by 10 May at Altus, Dyess, and Walker; move on to the remaining Atlas F bases; and be completed by mid-July. The work at the Atlas F sites would be the biggest task, since there were 138 generators there. The task would

require about 100 SAC personnel per base, working a two-shift, five day week. It would also be necessary to dispatch TDY personnel from Dyess, Walker, and Altus to Plattsburgh, Lincoln, and Schilling. At that time it appeared that SAC would not have the capability to test the Atlas E site generators; at least, it could not finish the testing by 31 July. On Plattsburgh sites #3 and #9, the following information was developed: At least two contractors in the Plattsburgh area had contacted the Base Civil Engineer and the district GSA office attempting to obtain a service/ salvage contract. They would remove all of the equipment, transport it to the base, preserve it, and place it in storage in one of the empty jumbo hangars. In addition, they would remove the structural steel, ducting, wiring, and plumbing for salvage. They would pay the Government for this privilege and seal up the site in any manner the Air Force required after their salvage was finished. The cash benefit for the Government would likely be more than $10,000 per site. SBAMA representatives were receptive to the idea and suggested that it would be discussed with General Mundell at SAC headquarters on 19 April. On Titan I diesel removal, the following information was developed: It was agreed that all four diesels should be removed from Complex A at Larson, instead of one as originally planned. A tentative schedule was agreed to for testing and removing. The procedures for testing were to be written at Larson, starting 20 April 1965. The testing procedures were to be validated; starting at Complex A, Larson AFB. All four generators were to be tested at that time. Removal was to start on or about 15 June. (SAC Internal Memo, 19 Apr 1965, Subj: ICBM Phasedown).

27 Apr (98) AFLC SUPPLY AND DISPOSAL PLAN. Headquarters DTAF advised its Norton office and SAC that representatives of AFLC, SAC, and SBAMA would meet at Norton AFB the week of 24 May 1965 to revise and update the AFLC Supply Disposal Plan. DTAF asked the

Norton office and SAC to have their proposed changes ready. (Msg. MCGM-35574, AFLC to SAC and Norton office, DTAF, 27 Apr 1965, Subj: AFLC Supply/Disposal Imple. Plan for Phase Out of Atlas E/F and Titan I Weapon Systems).

27 Apr (99) TRANSPORTATION OF MISSILES. General Bradley complimented SBAMA on its efforts to move and store the phased out missiles. He stated that the movement of 158 Atlas and Titan I missiles into Norton AFB marked an important milestone in the ICBM deactivation program. He said it was first planned that a large number of the missiles would be moved by air; but high priority demands for available airlift, plus the grounding of the C-133, had made it necessary for SBAMA to respond promptly to the requirement for almost total surface movement. Missile transporters had to be repaired and supplied with parts not previously anticipated, and quickly. All but nine of the missiles had been moved by surface during the worst of the winter season, over a total of 218,700 miles. There had been no serious accidents or incidents, and the job had been completed almost a month ahead of the original schedule. (Ltr. Comdr., AFLC, to SBAMA, 27 Apr 1965, Subj: Missile Deactivation Task).

29 Apr (101) TRANSPORTATION OF MISSILES. The first phase of the Atlas and Titan I ICBM deactivation program was completed when the last missile from the former operational squadrons arrived at Norton AFB at 1900 hours. That constituted completion of missile movement almost 30 days ahead of schedule. In all, 158 missiles were moved, 149 of which were transported by surface means. The successful completion of that task was attributed directly to the coordinated efforts and teamwork of the major commands involved. (Msg. MCGM-50020, AFLC to C/S, USAF, et al., 29 Apr 1965).

30 Apr DISPOSITION OF FACILITIES. Air Force Disposal

Reports, Nos. 148 through 161, were submitted to the Congressional Armed Services Committees pursuant to Section 2662, Title 10, United States Code. These reports requested approval for disposing of the following: (1) Fairchild (Washington) Atlas E Complex, 9 sites. (2) Forbes (Kansas) Atlas E Complex, 9 sites. (3) F. E. Warren (Wyoming) Atlas E Complex, 9 sites. (4) Altus (Oklahoma) Atlas F Complex, 12 sites. (5) Dyess (Texas) Atlas F. Complex, 12 sites. (6) Lincoln (Nebraska) Atlas F Complex, 12 sites. (7) Plattsburgh (New York) Atlas F Complex, 12 sites. (8) Schilling (Kansas) Atlas F Complex, 12 sites. (9) Walker (New Mexico) Atlas F Complex, 12 sites. (10) Beale (California) Titan I Complex, sites 1 and 2 only. (11) Ellsworth (South Dakota) Titan I Complex, 3 sites. (12) Larson (Washington) Titan I Complex, 3 sites. (13) Lowry (Colorado) Titan I Complex, 3 sites. (14) Mountain Home (Idaho) Titan I Complex, 3 sites. A 30 day waiting period was required before the Air Force could certify these facilities to the Chief of Engineers, Department of the Army, for the final action. (Ltr. D/CE, USAF, to the Chief of Engrs., Dept. of Army, 3 Jun 65, Subj: Final Disposal Directive - Atlas "E" and Titan "I" Missile Complexes).

6 May (103) DISPOSITION OF FACILITIES. The Directorate of Production and Programming, USAF, advised AFLC and SAC that by June the Air Staff Study Group would have explored and evaluated comprehensively all avenues of potential Air Force uses of Atlas F sites at Plattsburgh, Walker, Dyess, and Altus AFB's--and Titan I sites at Mountain Home, Beale, and Lowry AFB's. Sites at Larson, Lincoln, and Schilling had not been considered because those bases were phasing out. As of 6 May it appeared that the Air Force had a total need of one Titan I complex at Chico, California. Hq USAF stated that although additional evaluation and review were required, it was confident that those actions would be completed by July 1965. The intended purpose

of insuring a complete and recorded Air Force evaluation for potential uses prior to disposal would then have been achieved. Prior arrangements had been made with DSA and GSA for Air Force withdrawal of any complex from surplus until 31 July in the event future Air Force missions for those facilities were specified. (USAF Msg. AFSPDB-70084, 6 May 65, Subj: Storage of Atlas F-Titan I Fac.)

11 May (107) SITE DISMANTLEMENT. DISPOSITION OF FACILITIES. General Mundell asked Hq USAF to authorize immediate removal of Plattsburgh Atlas F Sites 3 and 9 from the list of sites currently scheduled for indefinite retention, and to further authorize the dismantling of those sites by a service/salvage contract. The reasons for the requests were as follows: (1) Water leakage at the sites made their further use questionable. (2) The connection of commercial power to those sites would be unreasonably expensive. (3) Release of the sites would permit the testing of the service/salvage type contract for dismantlement. (4) No interest had been expressed by any agency for either site. In anticipation of USAF approval, AFLC was preparing work statements for the two sites. Basically, property in the Atlas F brochures would be on the save list. Other property would revert to the ownership of the contractor. General Mundell requested early approval of the release. (AFLC Msg. MCGM-39067, 11 May 65, Subj: Early Disposal of Plattsburgh Atlas Sites 3 and 9).

25 May (114) RE-UTILIZATION OF EQUIPMENT. SAC, DLSC, SBAMA, and Headquarters AFLC agreed to SAC's proposal to centralize the sale of surplus property resulting from the phase out of the Atlas and Titan I weapon systems. The following decisions were reached: (1) SBAMA would report all spares no longer needed to the Defense Logistics Services Center. (2) SAC would similarly report to DLSC all surplus non-mobile AGE spares and all RPIE spares. (3) SBAMA and host bases would validate on-hand balances against stock

records prior to reporting surplus items to DLSC for sale. (4) DLSC would place and administer service/salvage contracts for dismantling and disposing of weapon system complex equipment. (5) Surplus property at SAC, TAC, and ATC bases would not be physically moved to the redistribution and marketing activity. In connection with (1) and (2) above, end items for which spares were applicable would be identified insofar as possible. In connection with (4), DLSC would identify those items which should be sold on service/salvage contracts, downgraded to scrap, or placed on individual surplus sales. The method used would be in consonance with the aim of obtaining the best return to the Government. In connection with (5), property would remain in place for removal by the buyer insofar as possible. (Ibid).

27 May

(116)

DIESEL GENERATORS. The DTAF Commander furnished USAF a list of all diesel generators at Atlas F sites, indicating manufacturer, capacity, hours of operation, and condition. He advised that a generator test schedule had been prepared and coordinated with SAC. There were 134 diesel generators still in use at Atlas F sites and three were out of commission for maintenance or parts. Four were currently undergoing test. The first generator had been tested on 26 April. Gen. Mundell estimated that the last generator test would be completed by 31 July 1965. He suggested that 1 April 1965 be set as a target date for the removal of the last diesel. (Ltr. Comdr., DTAF, to USAF (AFSPD), 27 May 65, Subj: Disposition Procedures for Diesel Generators).

8 Jun

(122)

SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB. SAC informed Headquarters DTAF that the Atlas F Silo equipment display at Lincoln AFB had been completed on 1 June and was now ready for inspection. SAC advised DTAF that it had been suggested, during the 31 March AFLC--SAC briefing to the Air Staff, that the major air commands be invited to review the equipment display. (Msg. DDM-52899, SAC to Comdr., DTAF, 8 Jun 65, Subj: Proj. Extra Purpose Display).

13 Jun (125) SITE DISMANTLEMENT PROTOTYPE, LINCOLN AFB. The Norton office, DTAF, informed the major air commands that AFLC and SAC had accomplished the prototype dismantlement at Lincoln AFB. Excess AGE items removed from one of the silos was currently on display. Personnel of the commands could inspect the equipment with a view to acquiring wanted items. (SBAMA Msg. SBGM-50021, 13 Jun 65, Subj: Proj. Extra Purpose Display).

9 Jul (132) SCREENING ASSETS AGAINST REQUIREMENTS. General Mundell asked Hq USAF what action it had taken with DOD to require Army, Navy and Air Force construction agencies to certify that they had screened Atlas E and F and Titan I brochures against their construction programs. (Msg. MCGM-52257, AFLC to USAF (AFSPD), 9 Jul 65, Subj: Util. of Excess Missile Equip).

9 Jul (133) SCREENING ASSETS AGAINST REQUIREMENTS. General Mundell reminded the AMA's and other AFLC activities that 31 July 1965 was the deadline for submitting requirements for excess missile site equipment to SBAMA. He urged all screening activities to make every effort to find ways of using assets listed in the brochures. He suggested visits to the Lincoln AFB display and to missile sites which SBAMA had designated for visitation. (Ltr. D/O, AFLC, to AMA's, et al., 9 Jul 65, Subj: Screening Atlas E, F and Titan I Brochures).

15 Jul (135) ORGANIZATION AND MANAGEMENT. Lt. General K. B. Hobson, Vice Commander, AFLC, made the following proposals to Hq USAF on future management of the missile phase out and site deactivation effort: (1) That the requirement for an AFLC military representative at each base be deleted in favor of retention of the AFLC Weapon System Logistics Officers currently in place at all bases. (2) That the AFLC ICBM Deactivation Task Force be disbanded, effective 1 August 1965. (3) That San Bernardino Air Materiel Area be designated

the organization to assume the responsibilities formerly carried out by the task force. The reason for these proposals was that the task had become primarily procedural and would remain so for the balance of the program. (Ltr., Vice Comdr., ICBM Deactivation Task Force).

20 Jul (136) DIESEL GENERATORS. Headquarters, Strategic Air Command, advised the USAF Civil Engineer of Mountain Home's recommendation to remove Titan silo diesel generators and associated equipment through the portal elevator silo rather than through a hole out in the powerhouse dome--the Larson AFB method. The Mountain Home AFB method envisioned disassembly of the engine from the engine block and bed plate, disconnection of auxiliary components, engine lift-out of the engine block and bed plate. By this method the powerhouse could remain intact as no excavation or extensive concrete cutting would be required. Inspection, evaluation, and reassembly would be done in missile site buildings or at the base. Not only would the method preserve the sale-inducing hardness feature of the silo, but also it would cost less. SBAMA had considered, without favor, a similar technique in May. (Ltr, Dep. D/CE, Hq SAC to USAF (AFOCE-K), 20 Jul 65, Subj: Titan I Diesel Generator Removal; Msg. SBGMA-51109, SBAMA to SAC, ATC, and AFLC, 18 May 65).

20 Jul (137) DIESEL GENERATORS. Headquarters USAF directed the removal and rehabilitation of all 500 kw generators from Altus and Dyess Atlas F. sites. Thirty-seven were to satisfy an urgent Southeast Asia requirement, three were to be earmarked for a Tactical Air Command project in lieu of three originally earmarked at Lincoln. The remainder were to be stored at Altus AFB pending further instructions. USAF directed that contracting agencies make necessary contractual changes for the increased rehabilitation and removal work. (Msg. AFOCE-

LB-87728, USAF to USAF Regional Civ. Engr., et al, 20 Jul 65).

30 Jul — ORGANIZATION AND MANAGEMENT. The Director of Administrative Services, Headquarters AFLC ICBM Deactivation Task Force, Provisional, was being discontinued as of 1 August. The responsibilities assigned to AFLC by the Chief of Staff, USAF, were to be discharged henceforth by the Commander, San Bernardino Air Materiel Area. Headquarters USAF had approved this change on 22 July. (Ltr. Dir. Admin. Servs. AFLC, to AMA's et al., Subj: AFLC ICBM Deactivation Task Force Provisional; USAF msg. AFCAV-88553, 22 Jul 65).

2 Aug — DIESEL GENERATORS. SBAMA advised AFLC as to the status of the diesel generator test and removal program. All testing had been completed. The five diesels formerly scheduled for testing at Vandenberg had been dropped from the testing requirement. Twelve diesels had been removed from Warren silos, 18 from Dyess, 2 from Lincoln, and 4 from Larson. (Ibid).

(139)
(141)

2 Aug — SCREENING ASSETS AGAINST REQUIREMENTS. DISPOSITION OF EQUIPMENT. As of this date item screening had been accomplished and redistributed orders had been processed. Excess declaration to DSA centers for the last nine locations had been delayed until after 1 July to retain the credit funds for the new fiscal year. Since 1 July disposition instructions had been furnished by all centers except the Defense Electronics Supply Center and Defense Construction Supply Center. The disposition instructions from DESC and DCSC were expected prior to 15 August. (Ibid).

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1965

20 Jul — The Department of Health, Education and Welfare (HEW) will hold a meeting in Plattsburgh on 20 Jul with representatives from Eastern States HEW Agencies. Approximately 50 persons are expected and will include representatives of universities and other type organizations. Purpose of this meeting is to discuss possible uses of missile sites and/or equipment for HEW use. A site will be toured on 21 Jul.

13 Aug — Atlas-Titan Sites to be Retained for Further Use. A tentative request by AFSPD has identified the Sites that are to be held in a retained status for the Department of Defense and the General Services Administration.

Sites for USAF	Requestor
Beale AFB "A" (Lincoln)	SAC
Beale AFB "C" (Chico)	MATS
Lowry AFB "C" (Elizabeth)	SAC
Lowry AFB "A" (Bennett)	AFSC
Mt Home AFB "A" (Orchard)	AFSC
Mt Home AFB "B" (Oreana)	AFSC
Lincoln AFB #3	AFSC

Sites for GSA	Requestor
Forbes AFB #2	FAA
Forbes AFB #6	Kans. School District
Forbes AFB #7	Kans. State University
Forbes AFB #9	Kans. School District
Warren AFB #7	Colo. Engr. Experiment Station
Warren AFB #8	National Science Foundation
Warren AFB #9	Colo. State University

Sites for GSA	Requestor
Fairchild AFB #3	University of Washington
Lowry AFB #4a	University of Denver
Schilling AFB #1, 2, 3	Kans. State University
Plattsburgh AFB #5, 6	N. Y. State University

24-31 Aug Pre-Disposal Conference for Atlas E, Atlas F and Titan I Assets. Representatives from AFSPD, GSA, DHEW, SAC and AFLC reviewed significant events and accomplishments to date. Action was then taken to establish responsibility and tentative schedules for the disposal of all equipment and real estate. The following is a summary of actions approved.

Retained Sites-The exact configuration for the USAF retained sites is not known. However, each major command requesting a site has been asked by the Task Force and AFSPD to identify the equipment they wish retained. AFSPD further requested the Commander to meet with the SDTAF at the base to review their requirements.

Information received by the Task Force indicates that the two retained sites at Beale, "C" (Chico) for MATS and "A" (Lincoln) for SAC will probably fall out.

Blue Suit and Service Contracts will be used to remove the equipment that has been agreed can be removed for reutilization.

For the GSA retained sites it was agreed by Committee to meet at the sites during the period 7-17 Sep to determine the configuration required. The Donee, DHEW, GSA, Base CE, SDTAF and Task Force Personnel will use the latest obligation listing to prepare a listing of property required by the Donee. The Donee

requirements will be reviewed and compared with Federal Agency requirements, and conflicts will be forwarded by SBGM through Command Channels for resolution.

Property authorized for removal will be by Blue Suit or Service Contract.

The Standard Form 118C will be used for transfer of equipment to the Donee at the completion of a Service/Salvage Contract to GSA.

The equipment located in the LCC's of the burned out Sites will be removed by AF Prior to 31 Oct and sites turned over to GSA on SF 118C.

Configuration of all sites turned over to GSA, except Donee sites will consist of the following:

a. Quonset with lighting, heating, fuel tanks
b. Fences outer boundry
c. Fences, chain link and posts, plus gates, CAP area
d. Street lights and poles, CAP area
e. All site designation signs, ground level

Required VS Available Generators

a. AFOCE will allocate and issue shipping instructions on all diesel generators and air conditioners over 100 ton capacity. This will include shipping instructions for spares, special tools and manuals.

b. During the Pre-Disposal Conference, AFOCE gave shipping instructions for 170 generators and holding 23 for South East Asia with 3 undecided at Lowry AFB.

c. There is a need for removing 44 diesels by Service Contract. AFOCE will fund for the Service Contracts to remove these 44.

Special Instructions for Disposal and Termination of Accountability.

a. Accountability for property to be sold by DLSC on the records of the BEMO will be transferred to R&M on an AF Form 695-1 on a systems basis.

b. The Base Civil Engineer transfers accountability for RPIE to R&M for property to be sold on an AF Form 695-1 without reference to Federal Supply Group (FSG). RPIE will be used in block 1 instead of the FSG.

Method of Reimbursement.

Dismantling costs will be reimbursable by all non-Air Force recipients of property removed by service contract. Also packing, crating, and handling costs for other than Air Force will be reimbursable and billed by the base. Reimbursement for dismantling costs will be as follows:

a. Hq SBAMA will be responsible for determining and initiating billing action.

b. Basis for determining dismantling costs will be estimated man-hours computed by SBAMA to remove property.

c. Cost will be computed by dividing the total estimated man-hours for all property removed by the contractors, into the total contract price for average hourly cost. The average hourly cost multiplied by removal hours for each unit of property for non-Air Force consignees determines dismantling costs for reimbursement.

d. The obligations authority at each base will furnish SBAMA Accounting and Finance Officer

copies of obligating documents issued in accordance with AFM 177-101, para 40302. SBAMA Finance Office will furnish the expenditure data on each O/A/contract to the DTAF. The DTAF will prorate cost for each recipient agency and furnish this information to Accounting and Finance for billing.

e. SBAMA Accounting and Finance will use standard procedures to initiate billing action.

Service/Salvage Contract Schedule

The base schedules for the Service/Salvage contracts were developed by DLSC in committee during the Pre-Disposal Conference. These schedules represent the best effort which DLSC can employ in accomplishing these tasks. The schedule is based upon a priority listing furnished by the Task Force and is predicated on a DLSC work capability basis to provide required accuracy in all action, both before issuance of IFBs and during the contract administration stage.

Obligations were suspended 28 Aug to allow for preparation of obligation listings to be used in preparing Invitations for Bids by DLSC.

Note: Continuing high priority requests required that further obligations be accepted, processing of these additional items continued until 1 Nov 1966.

31 Aug PLATTSBURGH AFB

The Invitation for Bids for the Service/Salvage contract at Plattsburgh AFB was opened on 31 Aug 1965. This contract has been let to get a feel for interest in this type contract and to establish a boiler plate to work from for the subsequent contracts. A positive bid of

$18,750 was received from a California company.

10 Sep Service/Salvage Contracts - A team of DLSC, SBAMA and Base personnel are at Larson AFB tagging save items and determining cut points for item removal. Teams are also scheduled to be at Beale, Fairchild, and Schilling on 15 Sep 1965.

GSA Retained Sites - The actual site configuration upon turnover to GSA will be determined by a team comprised of personnel from GSA, DHEW, and receiving activity. A schedule for this team has been obtained from GSA for all bases. This schedule is as follows:

Forbes AFB	9-15 Sep 1965
Schilling AFB	13-15 Sep 1965
Warren AFB	14-16 Sep 1965
Lowry AFB	16 Sep 1965
Fairchild AFB	13 Sep 1965
Plattsburgh AFB	16 Sep 1965

The AF obligated items which are required by the receiving activity and which cannot be obtained from another site or complex, will be referred to higher headquarters for resolution.

Vandenberg AFB Equipment Listing - AFLC (MCOOP) has requested OOAMA to identify to SBAMA the equipment that would be required for the storage of Minuteman missiles in the Atlas/Titan silos. Equipment so identified will not be removed pending USAF decision regarding the use of silos for storage of Minuteman missiles.

14 Sep Deactivation Status Briefing for General Mundell and Brig Gen W. Hamrick

17 Sep Plattsburgh AFB, Sites 3 and 9 - Contract was awarded to Contractors Rigging and Erection, Santa Fe Springs, Calif., on 14 Sep 1965. Contractor will assume responsibility for these sites and commence work on 24 Sep 1965.

Justice Department Clearance of Contractors - DSA/DLSC are working with the Justice Department to establish a system to process clearances in a minimum of time.

Spares Support of AFSC Retained Sites - SSD dispatched a message, 31321 Sep 65, to Hq AFSC requesting that appropriate arrangements be made with Hq AFLC to compute and retain applicable spares.

24 Sep — Plattsburgh AFB, Sites 3 and 9-Responsibility for sites was turned over to the Contractor on 24 Sep 1965 as scheduled.

GSA Retained Sites - The configuration desired by the donees for GSA retained sites has been received with the exception of Warren Site 8, National Science Foundation.

Configuration has been received for all AF retained sites except Mt Home "A" which is due from AFSC 27 Sep 1965.

1 Oct — Plattsburgh AFB, Sites 3 and 9 - The contractor took responsibility for the sites on 24 Sep 1965 and plans to begin work 11 Oct 1965.

Vandenberg AFB Equipment Listings - The DTAF has been informed that use of 576D and 576C Atlas Silos will not be used for storing Minuteman Missiles.

8 Oct — Diesel Generators - AFOCE has indicated that the following Diesel Generators will be removed by Service Contract prior to start of the Service/Salvage operation. The Service Contract will be funded by AFOCE and administered by Navy BUDOCKS.

Base	Diesel Generators
Larson AFB	8 Nordberg 1000 KW
Ellsworth AFB	12 Nordberg 1000 KW
Mt Home AFB	4 Nordberg 1000 KW
Fairchild AFB	8 White 440 KW
Schilling AFB	24 White 500 KW

AFW Spares Summary - The total initial inventory of AFW spares was 104.7 million dollars. We have been able to reutilize 53.1% of this inventory.

22 Oct — Plattsburgh AFB, Sites 3 and 9 - The contractor has started work.

Support for AF Retained Sites - Approximately 22,000 shipments were made from the AFW accounts to pre-position spares in the Host Base accounts at the retained sites.

19 Nov — Service/Salvage Contracts - The IFBs for Service/Salvage Contracts for Larson AFB and Beale AFB were distributed 18 Nov 1965.

3 Dec — GSA Retained Sites - GSA has advised that Walker, Site 11, is no longer to be donated to the State of New Mexico.

10 Dec — Service/Salvage Contracts - The Mt Home/Ellsworth IFB went to the printer on 9 Dec 1965. The IFBs for Lowry AFB and Altus AFB are scheduled to be released during the week of 13 Dec 1965.

17 Dec — Service/Salvage Contracts - The Lincoln IFB bids were opened on 14 Dec 1965. The high bid was for $122,640.

Status of Diesel Generators

Base	To Be Remov.	Remov.	In Work	Type of Contract
Forbes AFB	18	0	0	Serv/Serv Salv
Fairchild AFB	18	0	0	Serv/Serv Salv
Warren AFB	18	12	0	Serv/Serv Salv
Plattsburgh AFB	24	2	6	Serv/Serv Salv
Schilling AFB	24	24	0	Service
Lincoln AFB	24	0	0	Serv/Serv Salv
Dyess AFB	24	24	0	Service
Altus AFB	22	22	0	Service
Walker AFB	18	0	18	Service
Larson AFB	12	12	0	Service
Ellsworth AFB	12	12	0	Service
Mt Home AFB	10	4	6	Serv/Serv Salv
Beale AFB	11	0	0	Serv/Serv Salv
Lowry AFB	22	0	0	Serv/Serv Salv

30 Dec — Service/Salvage Contracts - The successful bidder at Schilling AFB Lesco Automotive Co., Brooklyn, New York. The successful bidder at Lincoln AFB was Aaron Ferer & Sons, Omaha, Nebraska. High bid was $76,789.99.

1966

7 Jan — Service/Salvage Contracts - The bids for the LOX Plant at Lincoln AFB were opened with a high bid of $327,000. The bids for the portions of the LOX Plant remaining at Fairchild AFB were opened with a high bid of $10,000.

14 Jan — Service/Salvage Contracts - The bids for the five complexes at Forbes AFB were opened with a high bid of $355 per complex. The bids for the five complexes at Warren AFB were opened with a high bid of $63. per complex. The bids for the two complexes at Beale AFB were opened on 11 Jan 1966 with a high bid of $263,000. The bids for the eight complexes at Plattsburgh AFB were opened with a high bid of $75,698.80.

21 Jan — Service/Salvage Contracts - Bids for the three complexes at Larson AFB were opened with a high bid of $313,789.99. The bids for the five complexes at Fairchild AFB were opened with a high bid of $63 for three sites; a high bid of $1,000. for one site; and a high bid of $6,266.66 for one site.

28 Jan — Service/Salvage Contracts - DLSC was requested to add Lincoln Site #3 to Service/Salvage.

4 Feb — Service/Salvage Contracts - Bids were opened for Altus AFB. High bid for items 1 thru 5, $7,800. per site and for items 6 thru 11, $11,150. per site.

11 Feb — Service/Salvage Contracts - Bids were opened for Dyess AFB. High bid for sites 1 thru 4, $8,501. per site and for sites 5 thru 12, $15,150 per site.

Retained Sites - Action is underway at all bases having retained sites in preparation of contracts to remove designated Save Items.

18 Feb — Plattsburgh AFB Sites 3 and 9 - All Save Items have been removed from Site 3.

Service/Salvage Contracts - Bids were opened for Walker AFB on 15 Feb 1966. High bid was $335,000. The bids were opened for Mt Home/ Ellsworth on 16 Feb 1966 for a total bid of $543,904.88; for Lowry AFB on 17 Feb 1966 for a high bid of $395,000.

Reutilization - To date the total reutilization is 66%. Following is a break-out, by base, of the dollar value of equipment (Save List) reutilization.

H-SBAMA Special Study-12, Chronology

Base	AGE	CEM	RPIE	TOTAL
Beale	18,915,229	1,318,207	1,598,737	21,832,173
Ellsworth	16,388,547	691,530	1,615,913	18,695,990
Larson	16,685,330	959,264	1,513,556	19,158,150
Lowry	45,980,906	1,338,444	3,784,932	51,104,282
Mt Home	20,818,513	514,827	1,533,157	22,866,497
Warren	19,230,612	1,451,774	1,776,364	22,458,750
Forbes	17,481,570	1,296,529	2,290,024	21,068,123
Fairchild	19,222,841	2,074,975	1,194,680	22,492,496
Altus	7,248,205	2,084,616	2,705,348	12,038,169
Dyess	6,843,109	2,280,781	2,222,531	11,346,421
Lincoln	8,992,740	2,486,960	2,051,032	13,530,732
Plattsburgh	15,854,820	1,538,671	2,274,401	19,667,892
Schilling	17,231,602	2,514,504	2,368,806	22,114,912
Walker	11,131,667	1,498,317	2,255,147	14,885,131
Vandenberg	11,101,042	446,910	639,729	12,187,681
Total	253,126,733	22,496,309	29,824,357	305,447,399

3 Mar 66 General Bradley briefed on Deactivation Status by Brig. Gen. W. Hamrick at AFLC

4 Mar 66 Service/Salvage Contracts - Bid was opened for the destroyed sites at Walker and Altus and high bid of $47,777 was received. The bid was awarded for the LOX Plant at Altus for $181,658.

11 Mar Plattsburgh AFB Sites 3 and 9 - All Save Items have been removed from sites 3 and 9.

18 Mar Service/Salvage Contracts - The bid was opened for Site 3 at Lincoln AFB. A responsive bid was received of $8,555.55.

25 Mar Service/Salvage Contracts - The bid was opened on 23 Mar 1966 for the site which fell out at Mt Home. A responsive bid was received of $290,000.

1 Apr — Service/Salvage Contracts - The bid for 4 complexes at Mt Home/Ellsworth for $534,904.88 was awarded 1 Apr 1966 to Contractors Rigging and Erection Co.

Surplus Missile Spares Sales - Bids were opened on the Norton AFB surplus spares sale on 17 Mar 1966 and Vandenberg AFB on 24 Mar 1966. The total of the high bids was $174,022.15 at Norton and $46,122.15 at Vandenberg.

8 Apr — LOX Plant Service/Salvage Contracts - A letter of default was issued the contractor at Lincoln AFB for lack of performance. A new IFB is being printed, again offering the plant for sale.

Surplus Missile Spares Sales - Bids were opened on the Schilling-Lincoln AFB surplus spares sale on 5 April 1966. The total of the high bids was $21,313.45.

22 Apr — Contract Awards - All sites/complexes have now been awarded. Fairchild Site 3 was awarded on 19 Apr 1966 to the Hod Company for $4,266.66.

LOX Plant Service/Salvage Contracts - Bids were opened and awarded for the LOX Plants at Dyess and Mt. Home. The high bidder for both sites was Nielson, Harbertson, Evans - $147,511.30 for Dyess and $142,560.30 for Mt. Home.
Bids were opened and awarded for the LOX Plants at Walker and Ellsworth. High bidder for the LOX Plant at Walker AFB was Grenader Equipment for $152,642.63. The high bidder for LOX Plant at Ellsworth was National Cylinder Gas for $156,000.

Removal (Service) Contracts - The IFB's for the Removal (Service) Contracts have all been released with the exception of Vandenberg AFB. The contract has been awarded for Warren AFB.

Surplus Missile Spares Sale - Bids were opened on the Warren AFB surplus spares sale on 19 Apr 1966. High bid for items to be sold was $11,184.57.

29 Apr — Retained Sites - Hq USAF (AFSPDB) advised by telephone that Complex C at Beale AFB had been approved for use by MAC.

Removal (Service) Contracts - Contracts have been awarded for Fairchild and Beale.

Surplus Missile Spares Sale - Bids were opened on the Beale AFB surplus spares sale. The total of the high bid was $38,194.17. Bids were opened on the Ellsworth/Lowry AFB Surplus spares sale. The total of the high bids for items to be sold was $51,129.55.

6 May — Service/Salvage Contracts - Bid was opened for the LOX Plant at Lincoln AFB. High bid of $90,787.87 was received.

Surplus Missile Spares Sales - Bids were opened on the Fairchild Larson AFB surplus spares sale. The total of the high bids for items to be sold was $34,086.64. This was the last scheduled surplus spares sale. The total of the high bids for all sales was $384,696.42.

13 May — Service/Salvage Contracts - All Save Items have been removed from Schilling AFB Sites 4 thru 12.

The high bidder for Walker AFB Sites 3, 4 and 6 thru 12 did not provide the required purchase price, bond and insurance and was defaulted. DLSC is preparing a new IFB offering these sites for sale.

20 May — Service/Salvage Contracts - Contractors have removed all Save Items at Walker AFB Sites 2 and 5, Altus AFB Site 6 and Plattsburgh AFB Sites 3 and 9.

Removal (Service) Contracts - The Lowry AFB contract was awarded on 20 May 1966.

27 May — Removal (Service) Contracts - Contract was awarded at Forbes AFB.

3 Jun — Service/Salvage Contracts - All Save Items have been removed from Fairchild AFB Site 5.

10 Jun — Service/Salvage Contracts - All Save Items have been removed from Fairchild AFB Site 7.

17 Jun — Service/Salvage Contracts - The bids for Walker AFB Sites 3, 4, and 6 thru 12 were opened on 15 Jun 1966. The high bid received was not considered to be the fair market value. DLSC plans on offering these sites for sale again.

24 Jun — Retained Sites - GSA regional office at Denver has advised that Site 4 at Warren AFB will not be given to Kimbell County, and they will offer the site for sale.

1 Jul — Service/Salvage Contracts - LOX Plant contracts at Dyess, Mt Home and Ellsworth have been completed.

Service/Salvage Contracts - All Save Items have been removed from Warren AFB Sites 1, 2, 3, 5 and 6.

15 Jul — Service/Salvage Contracts - All Save Items have been removed from Forbes AFB Sites 1, 3, 4, 5 and 8.

Service (Removal) Contracts - Service (Removal) Contracts at Warren, Beale and Mt Home AFB's have been completed.

Diesel Generator Removal - The Diesel Generators have all been removed at Warren, Altus, Dyess, Lincoln, Plattsburgh, Schilling, Walker (except

destroyed Site #1), Beale, Ellsworth, Larson and Mt Home AFB's. Total generators removed is 236, and the total still to be removed is 24.

GSA Retained Sites - The GSA Regional Office at Denver has advised that the Titan I Missile Site, 724A at Lowry AFB, will not be given to the City and County of Denver. GSA will offer the site for sale.

22 Jul — Service/Salvage Contracts - The bids for Walker AFB Sites 3, 4 and 6 thru 12, were opened on 21 Jul 1966. The high bids received were: Site 3 -$1,600.00, Site 4 - $1,600.00, Site 6 - $21,111.21, Site 7 - $21,111.21, Site 8 - $21,111.21, Site 9 - $3,200.00, Site 10 - $21,111.21, Site 11 - $21,111.21 and Site 12 - $7,527.50. DLSC plans on awarding sites 6, 7, 8, 10, 11 and 12 to the high bidder and offering Sites 3, 4 and 9 again.

Service (Removal) Contracts - The Service (Removal) Contracts are completed at Warren, Beale, Mt Home and Lowry AFB's.

29 Jul — Service/Salvage Contracts - All Save Items have been removed from Lincoln AFB Sites 1, 2, 4 and 12. Plattsburgh Sites 1, 2, 4, 7, 8, 10 and 12. Fairchild AFB Site 3 and Mt Home AFB Complex A.

5 Aug — Service/Salvage Contracts - All Save Items have been removed from Larson AFB Complexes A, B and C. The LOX Plant Contract at Walker AFB has been completed.

Service (Removal) Contracts - The Service (Removal) Contracts are completed at Fairchild and Vandenberg AFB's.

12 Aug — Service/Salvage Contracts - All Save Items have been removed from Fairchild AFB Sites 4, 6 and 8.

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10 Aug — Bids were opened for Walker AFB Sites 3, 4, and 9. The high bid received was $26,137.40.

19 Aug — Service/Salvage Contracts - All Save Items have been removed from Beale AFB Complexes A and B.

7 Oct — Diesel Generator Removal - Four more diesel generators have been removed at Lowry AFB. This completes the Diesel Generator Removal Program. Two hundred and sixty (260) diesel generators have been removed from the Atlas E, Atlas F, and Titan I missile sites.

4 Nov — Service/Salvage Contracts - All save items have been removed from Altus AFB Sites 7 through 12 and Dyess AFB Sites 1 through 12.

25 Nov — Service/Salvage Contracts - All save items have been removed from Lowry AFB Complexes 724B and C, and 725B.

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5 Jan — Service (Removal) Contracts - The last six cryogenic and pressure tanks were removed at Forbes AFB. All Service (Removal) Contracts are completed.

12 Jan — Service/Salvage Contracts - All save items have been removed from Altus and Ellsworth AFBs.

18 Feb — Service/Salvage Contracts - All save items have been removed from Walker AFB. This completes all Atlas/Titan Service/Salvage contracts.

31 Mar — SDTAFs closed. Walker AFB SDTAF closed on 31 March. All SDTAFs have been closed and records forwarded to SBAMA.

15 Jun — All records have been audited, screened, collated, packed, and shipped to Wright-Patterson AFB for storage. All equipment has been turned in; all personnel have been released. Atlas/Titan site deactivation project has been completed.

F O R E W O R D

Preparation of this special study was directed by Lieutenant General L. L. Mundell, Headquarters Air Force Logistics Command (AFLC), because of the importance of the Missile Site Deactivation Program and the significant role played by the San Bernardino Air Materiel Area (SBAMA) in its accomplishment. The period covered in this study is November 1964 through 15 Jun 1967. Since SBAMA's role in this program was that of a centralized management activity which effectively was a staff element of Headquarters AFLC Deactivation Task Force, much of this study covers the integrated activities of both Headquarters AFLC and SBAMA. This is done in order to present the complete picture of the program. This study is presented in as much detail as possible. However, due to the scope and complexity of the Deactivation Program, minute phases of the program might not be included.

This study summarizes SBAMA's role in the Missile Site Deactivation Program which is divided into four specific phases: (1) Removal/Transportation/Storage of missiles. (2) Preservation of Sites/Complexes. (3) Screening and Reutilization and (4) Disposition of Real Property Installed Equipment (RPIE) and Real Property.* This study is divided into six chapters - Chapter I,

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*See Chapter IV, this volume for details.

Introduction, will provide broad coverage of the program dealing with specific subjects and pointing out the unique and unprecedented aspects of the program.

Chapter II presents the directives which governed the establishment and operation of the program.

Chapter III provides a detailed breakout of the Deactivation Task Force organizational structure including names, titles, rank, position, locations, and members of personnel at each deactivated missile site. In addition, contractors who worked at the sites are identified, as well as acquisition cost of each site.

Chapter IV covers the four phases of the program: (1) Removal, Transportation and Storage of Missiles. (2) Preservation of Sites/Complexes. (3) Screening and Reutilization and (4) Disposition of RPIE and Real Property, and Spares Story.

Chapter V delineates the story of the prototyped tasks in the program.

Chapter VI attempts to evaluate accomplishments as outlined by the directives in Chapter II.

The remaining parts of the study include footnotes listed by Chapters, Glossary, Bibliography, Appendix and then volumes of supporting documents.

Acknowledgement is in order to all SBAMA Deactivation Task Force personnel for their splendid cooperation given to the

Historian in conducting research.* Without their help it would have been impossible to write this study. Particular appreciation is extended to John A. Sowell, SBAMA (SBGMATE), for his assistance as consultant on technical subjects involved in this study. Mrs. Phyllis J. Thiot's contributions to the success of this special study were numerous. Mrs. Thiot helped to assemble and screen the hundreds of documents used for the seven supporting document volumes. She used her initiative in many ways to present the final text of the study. The Table of Contents speaks of her work. The final typing in accordance with stringent stylistic rules had to be followed when she typed the multilith master copies. Hence, a special note of appreciation for her work.

Historical writings are as accurate as the sources from which they are written, therefore mention must be made of reference material used in writing this study. Among the basic documents used, the author researched official publications such as orders, directives, general correspondence, statistical reports, agreements, and other available documents. Interviews with key personnel were of great value in getting the over-all picture. Attendance at various meetings and briefings were of particular help to gain a broad orientation of subjects discussed.

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* See Bibliography, this study for names and titles.

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INTRODUCTION

Why Program was a Unique One?

No Additional Manpower

Unprecedented Problems

New Management Concepts

Relationships, AF-DSA-GSA

Concurrent Screening of Brochure

Service/Salvage Type Contracts

DLSC to Contract in Support of Air Force

Chapter I

INTRODUCTION

A First in Air Force History

This program, called the "ICBM Site and Missile Deactivation" was a unique "first" of its type in the annals of Air Force History. It was indeed an unprecedented program insofar that for the first time in Air Force or any history did anyone have to remove and transport missiles from their underground system of silos located at sites which were scattered throughout the Continental United States; screen and salvage all equipment including diesel generators; dispose of real property installed equipment (RPIE) as well as real estate. In fact, the success of this program may be measured by how well the Air Force was able to reutilize the property by using a singular large scale advertisement and by preservation of sites. All this was considered to be a pioneering movement, a first of its kind in history.

Another reason why this program was uniquely important was the fact that the cost involved in this program was over a billion dollars for equipment and the total investment was $5.5 billion.[1]

This program was considered a pioneering first of its kind for the following reasons: (a) Headquarters United States Air

Force (USAF) did not authorize additional manpower to accomplish this task; therefore personnel required to man the task force were identified from existing resources available to the command.[2] To assure that the Deactivation Task Force (DTAF) was adequately staffed with competent, experienced personnel, Air Force Logistics Command (AFLC) established a central management office for deactivation at the San Bernardino Air Materiel Area (SBAMA), Norton Air Force Base (AFB), the activity which provided logistic support for the Atlas and Titan I weapon system during the operational phase. AFLC appointed the SBAMA Deputy Commander as the Deputy Commander for the Deactivation Task Force. This decision provided experienced personnel from the Systems Support Management Divisions (SSMD), Service Engineering Division, Directorate of Supply and Transportation (D/SST) and other elements of SBAMA as required. This provided a staff of personnel highly specialized and experienced in missile system support to formulate the deactivation program. It should be pointed out that other USAF commands involved in the program, the Strategic Air Command (SAC), the Tactical Air Command (TAC) and the Air Training Command (ATC), also used available experienced personnel for accomplishing their assigned deactivation tasks. In addition to "no new manpower authorizations," very limited funds were made available to AFLC and then only for specified costs, thereby making it essential for all tasks to be accomplished with minimum expenditure of money. AFLC costs, not

specifically funded by Headquarters USAF, were financed from AFLC's existing appropriations without any degradation of the overall AFLC mission.[3] (b) Unprecedented major problems were as follows: (1) Removing, transporting and storing of all deactivated missiles on a compressed schedule in an extremely short span of time. This problem was compounded by changes from proposed airlift to surface transportation,* due to grounding of the C-133 aircraft. (2) Problems of preservation of the installed equipment in the deactivated sites required sustained environmental control of temperature and humidity within the underground silo facilities.** (3) Effective screening and reutilization of excess equipment. This was resolved through the use of brochures and concurrent screening by all governmental agencies.*** (4) Removing Titan I diesel generators--each weighed 50 tons and required re-engineering methods of removal.**** (5) Disposition of RPIE and real estate in the most economical way. AFLC/SBAMA resolved this problem by the unique use of service/salvage contracts.+ The Air Force had never used this method of disposal. The above were the most

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* See Chapter IV, this study for detail.

** See Chapter IV, this study for detail.

*** See Chapter IV, this study for detail.

**** See Chapter VI, this study for detail.

\+ See Chapter IV, this study for detail.

outstanding major problems, but there were numerous other problems discussed in other chapters of this study.

The most outstanding management techniques developed by the SBAMA Task Force included: (1) Establishment of a monitoring and control system which involved continuous reporting and tracking of missile movement. This system was so effective that it provided the SBAMA Task Force complete information of the whereabouts and condition of each missile at all times.* (2) A system by which concurrent screening could be accomplished provided for a total inventory of assets at all sites to be screened simultaneously by all Department of Defense (DOD) organizations and other government agencies.** (3) In the preservation area there were technical as well as managerial problems. The SBAMA Task Force made a major management decision to prototype in order to determine the best method of accomplishing the preservation and still stay within the use of limited number of manpower. (4) Throughout this program, management has been faced with decisions where previous experience or precedence was extremely limited or non-existent. Wherever possible, prototypes were accomplished.*** (5) AFLC/SBAMA managers made an unprecedented

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* See Chapter IV, this study for detail.

** See Chapter IV, this study for detail.

***See Chapter VI, this study for detail.

decision to use the Service/Salvage method of dismantling sites. (6) The "Closed-Loop Audit Trail" accounting system covered all disposition action performed from receipt of the excess inventory to final disposal. (7) One final major management technique used was the setting up of a deactivation control chart room at the very beginning of the program. This room displayed management charts which recorded major milestones in all areas of the program. A method for tracking and updating these charts was developed as the program progressed. Specific personnel were assigned to maintain each chart in an updated form at all times. Information to keep charts updated was supplied by scheduled telephone calls from the Site Deactivation Task Forces (SDTAF). Weekly meetings were held in the chart room with SBAMA DTAF management personnel to review the program status in each area, to highlight problems requiring management actions, and to implement these actions on a quick reaction basis. In addition, monthly meetings with all the SDTAF's were held to bring the site deactivation personnel up-to-date on all aspects of the program, to highlight problems, and to implement corrective actions. This central chart room also supplied a source of updated program data for various briefings to visiting officials and for reports to higher headquarters. This management technique of centrally recording and controlling all major milestones and actions provided a means for the DTAF managers to apply themselves to significant and

pressing problems while at the same time getting an overall view of the program. In a program of this type, operating with a minimum of personnel and with tight schedules to meet, this centralized method of control and exchange of communications has proven to be an invaluable management tool.

Relationships Between AF, DSA/DLSC, and GSA

Very early in the program the Task Force realized the need for close and intertwined relationships with the Defense Supply Agency (DSA) and General Services Administration (GSA).[4] The main reason was that DSA and GSA had specific responsibilities, such as DSA had redistribution and disposal of equipment within DOD, while GSA had disposal of equipment and real estate not within DOD.

GSA/DSA/Defense Logistics Services Center (DLSC)* had been closely integrated into the program from the very beginning. These organizations' representatives attended and participated in all major meetings and conferences and provided excellent cooperation and assistance, as well as aggressive action in creating and executing numerous major policies and management decisions in the program. GSA was extremely cooperative. They agreed to accomplish their screening concurrently with DOD. They also placed an advertisement

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*DLSC is a part of DSA.

in the Wall Street Journal* in April 1965, to stimulate interest on the part of prospective buyers to determine what commercial applications could be found for the deactivated launch emplacements.

In addition, DSA/DLSC printed and distributed the brochures listing excess material,** which were used by all screening agencies. GSA, DSA, DLSC gave assistance in developing a method by which equipment was to be removed from the complexes without using Air Force dollars. The assistance consisted of providing a number of methods of disposing of equipment. From these methods the Task Force selected the best methods suited for economic dismantlement and disposal of missile sites by using the service contracts for retained sites and the Service/Salvage contracts for disposal sites. The Service/Salvage method provided that the contractor would remove those items for which the Government had requirement at no cost to the Air Force, and the remaining items would belong to the contractor. Using this method was indeed a new management concept.

In the preparation for the Service/Salvage type contracts, DLSC provided a team of personnel to visit each deactivated site to develop Invitation For Bids (IFB). These bids were prepared from work statements developed by AFLC (SBAMA). DSA authorized

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* See Volume III, Tab C.

** NASA, AFA, Dept of Army, Navy, AF, DH&W, GSA, DSA, AEC, Dept of Agriculture, Dept of Interior

DLSC to let Service/Salvage type contracts in support of this Air Force program.

The AFLC SBAMA DTAF was called upon to accomplish a colossal project without additional manpower and little funds; it faced and solved numerous major problems; developed new management concepts; worked in close relationship with a great number of agencies; screened concurrently for the brochures; introduced Service/Salvage type contracts and obtained the agreement from DSA to allow DLSC to contract in support of the Air Force. All these are evidences of why the program would, in time of history, be known as an Air Force "first," making it an unprecedented program in the annals of United States Air Force History.

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DIRECTIVES AND GUIDANCE

DOD - Directives, Program Documents

USAF - TWX AFCVC 96605

USAF Plan of Action

AFLC - Supply/Disposal Plan

SBAMA - General Plan of Action

Chapter II

Directives and Guidance

The original announcement released by the Department of Defense came in the form of a news release entitled "Department of Defense Announces Actions to Discontinue, Reduce, or Consolidate Activities."[1] This news release announced that the Atlas E, Atlas F, and Titan I missile installations were to be inactivated. The reason for this decision was as follows: The Atlas E, F and Titan I missiles served their purpose as first generation missiles mostly because they were relatively vulnerable and slow reacting weapons.* Therefore, DOD decided to phase them out of the system of missiles.[2] The Titan II and Minuteman forces were retained.**

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* The Atlas E sites, configured one missile per coffin-type encasement, were not hardened to any appreciable degree, therefore under attack by enemy, these missiles would most likely be destroyed; in addition, the Atlas E missile had a slow reaction time. The Atlas F sites were configured one missile per silo, the sites were hardened, but the missile had an unsatisfactory reaction time. The Titan I complexes, configured three missiles per complex, had hardened sites; the missiles' actual survival potential, however, was very uncertain, because Titan I and Atlas F missiles had to be elevated from the silo and would be exposed for a period of time prior to launch. Also, the reaction time of the Titan I was slow.

** In contrast, the reaction time of the Minuteman was rapid, the sites were more hardened, and the missile was launchable directly from the silo. The Titan II used storable liquid prcpellants, could carry the largest payload of all ICBM's, had a reaction time of one minute, and was deployed in a fully hardened configuration for silo launch. Both the Minuteman and Titan II were reliable and operationally effective systems capable of satisfying strategic missile force requirements.

The force to be phased out consisted of 27 Atlas E, 72 Atlas F, and 54 Titan I launchers located at 14 bases.[3]

The decision to phase out those missiles involved several factors which included the national importance of Intercontinental Ballistic Missiles (ICBM's) and the investment of funds. Nevertheless, those first generation missiles provided an initial ICBM deterrent when it was needed, but at this point of time, they were no longer supportable either from a cost or requirement standpoint.[4] For example, the cost of operation and maintenance was approximately ten times as much per year for each Atlas and Titan as it was for a Minuteman. The average in manpower per missile for support of the Atlas or Titan was about 80 men; while for the Minuteman it was approximately 12 men.[5]

There were considerable quantities of Minuteman missiles in the inventory at the time of the DOD announcement to phase out the Atlas E and F and Titan I missiles. At the time of this announcement the Air Force ballistic missile inventory consisted of the Atlas E, F, Titan I and II, and Minuteman, located so that support was given by 22 bases. The first of these missiles became operational in September 1961.[6]

DOD estimated an approximate $117 million of monetary savings as a result of the phase out of the Atlas E, F and Titan I missiles. Furthermore, the requirement for approximately 12,200 military and 300 civilian spaces would be eliminated. Also, phaseout of those systems would reduce support requirements at 15 installations.[7]

The magnitude of the deactivation process may be understood when considering that there were 117 missile sites, 153 launchers, and 216 missiles --counting missiles on operational launchers, spares with operational units, missiles in storage for operational testing, and missiles still at manufacturers' plants. Deployed Atlas E's were encased in concrete coffins, Atlas F's and Titan I's in hardened underground silos.

The original 19 November 1964, DOD announcement was followed by two United States Air Force (USAF) directives* in a form of TWX's.[**8] According to the November 20 directive, AFSPB 92162, the Atlas E and F forces were to be programmed to phase out during the last half of Fiscal Year 1965; the materiel acquisition and update activities were to be terminated; all effort of hardware acquisition which was not time-phased to the deactivation schedule was to be terminated; Strategic Air Command (SAC) would justify continuation of support on case by case basis; the Atlas E and F operational test and follow-on programs were no longer required; the Atlas F Demonstration and Shakedown Operation (DASO) of five missiles remained unchanged; the Atlas E and F specialist training was cancelled;

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* USAF issued a similar program directive, TWX Number AFSPDB 92163, covering the TITAN I Phaseout.

** See Vol. II, Tab B, this study for referenced directive TWX's.

Atlas E and F engineering change proposals, technical data changes, Materiel Improvement Projects, and modification actions were to be reduced to absolute minimum essential. Each command was to take action required to comply with these directions in order to maximize cost savings. Also, each command reviewed all current projected tasks and funding, and cancelled those not absolutely essential to support the revised program.

The November 20 directive also spelled out that USAF would determine the extent to which surplus Atlas E and F missiles would be used as boosters. Air Force Logistics Command (AFLC) was to be advised of storage requirements. AFLC and SAC were to add the Atlas F to their phaseout plan for Atlas E and Titan I. USAF requested that they be notified regarding the preliminary funding impact. Finally, AFLC was to advise USAF as to the most economical method of storing missiles located at General Dynamics/Astronautic.*

In unclassified message Number 80911, AFLC delegated the responsibility to San Bernardino Air Materiel Area (SBAMA), as the Systems Support Manager (SSM), to submit funding impacts covering the early phaseout of the Atlas missiles. Guidance was to be in accordance with USAF messages as discussed above. All Air Materiel Areas (AMA's) received these messages with request to cooperate with SBAMA in order to meet the tight deadline of 25 November 1964.

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* See Volume II, Tab B, this study for original directive.

SBAMA was to submit funding impacts by Fiscal Year and by budget program activity, within each procurement appropriation, and by category of expense. In addition to the funding impact, AFLC requested SBAMA to provide estimated costs for storage and transportation of Atlas missiles.* SBAMA provided the answer by a priority message, SBV 855176,** by listing the fund impacts by Fiscal Years. In addition, transportation estimates could not have been provided this early in the program.

On 24 and 25 November 1964, the Chief of Staff met with SAC, AFLC and Air Training Command (ATC) to discuss command responsibilities for disposal and degree of security required at missile sites. The problem of disposal of missile complexes was complicated by the phaseout of many systems in a short span of time. This was a task which was not the mission of any specific command; nevertheless, it was a problem facing the USAF. The cooperation of all commands was necessary. Recognition of the remaining short time before the first missiles were removed from emergency war operation, and economics involved, necessitated the establishment of the following policies to manage the colossal work of deactivation:***

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* See Vol. II, Tab B for message 80911.

** See Vol. II, Tab B for message 855176.

*** See Vol. II, Tab A, this study for message AFCVC 96605.

1. Existing regulations as modified by message 96605 would apply.

2. Air Force and other DOD agencies were to compress the schedule for screening.

3. Military SAC/AFLC personnel were to be utilized where possible.

4. Excess materiel in the missile program was to be used in other programs instead of new buys.

5. After classified equipment was removed, site security was to be reduced to "surveillance only."

The best solution for all concerned responsibilities for the commands are enumerated below:[9]

1. AFLC was to assume responsibility for disposition of equipment; executive management for disposition of systems assets, including Real Property Installed Equipment (RPIE), but excluding real property.

2. AFLC to establish a Headquarters AFLC Deactivation Task Force to monitor and control the disposition processes which were to include DOD screening of excess assets, scheduling for removal of communications equipment.

3. An AFLC military representative of appropriate rank, located at each base, was under the jurisdiction of the Headquarters AFLC Task Force Commander and reported to the Deputy Commander of the SBAMA Task Force, who in turn was responsive to the Commanding

Officer of AFLC Task Force. This representative assumed operational control of a local Task Force provided by SAC to be utilized in the disposal of materiel. The AFLC local Task Force Commander had the responsibility to control all disposal of organizational materiel and equipment and removal of RPIE. It was also the local Task Force Commander's duty to insure adequate environmental care until such time as the sites were reported to General Services Administration (GSA) for disposition.

4. AFLC provided Systems Support Management personnel at SBAMA for screening of items, participating in scheduling of items to be removed, and engineering support.

5. AFLC provided Ground Electronics Engineering Installation Agency (GEEIA) support for screening and removal of communication equipment.

6. AFLC provided contractual support when needed.

7. AFLC provided transportation coordination for timely missile movement.

8. Jointly with SAC, AFLC was to publish and provide USAF for approval detailed phaseout plans for the Atlas E, F, and Titan I.

SAC Support

1. Except as enumerated above, SAC was to retain responsibility and accountability as required in current regulations and directives.

2. SAC was to provide personnel support to the Task Force Commander, both at Headquarters AFLC and at each base, and a

permanent SAC representative to insure a coordinated effort. At each base the SAC Detachment authorized 150-200 personnel for the deactivation task. These personnel were placed under the operational control of the AFLC Task Commander at each base. The administrative support of the SAC Detachment was given through normal channels. SAC and AFLC cooperated in the development of required phaseout plans.

Host Base Support

1. Each host base was to retain responsibility and accountability as prescribed by current directives, except as modified by the 96605 AFCVC directive message.

2. Host base was to provide administrative support to the local Task Force Commander when such support was not available from within the SAC detachment. This included office space and secretarial services.

3. As determined by local authority, the host base was to provide site security throughout the phaseout as required in support of GSA, and

4. To provide utility services as necessary.

Headquarters USAF Support [11]

1. Headquarters USAF assumed the responsibility to provide funding beyond command capabilities. SAC/AFLC were to determine fund requirements and provide their justification to Headquarters USAF.

2. Headquarters USAF stated that all efforts would be made to assure expedited screening of excess items by other government agencies.

3. Headquarters USAF was to approve determination as to degree of environmental control as affecting the equipment within the silos at various sites.[12]

SAC, AFLC, ATC, and Tactical Air Command (TAC) Support

USAF directed that all above agencies submit detailed plans for approval. USAF also stated that although the deactivation, dismantling and disposal tasks were the greatest faced by the Air Force since World War II, every effort should be made to accomplish the job as economically and efficiently as possible.

USAF gave an indication for need of storing the Atlas E, F, and Titan I's to be used for sub-orbital missiles in the next five years as well as saving some selected complexes to support future weapon systems.[13]

Preliminary planning to phase out the Atlas E and Titan I preceded the USAF directive of 10 December 1964.[14] On 18 September 1964, Headquarters USAF directed AFLC and SAC to prepare and submit plans for the phaseout of the Atlas E and Titan I missiles and for re-utilization of equipment.[15] On 21 November 1964, Atlas F was to be included in the USAF plan.[16] In this preliminary planning, SBAMA provided the basic information data for inclusion in the basic USAF plan.

On 16 December, AFLC and SAC representatives met at Offutt Air Force Base and developed a plan known as "USAF Plan of Action for the Phase Out and Disposition of the Atlas E, Atlas F, and Titan I." They presented it at a meeting at Headquarters USAF on 17 December 1964. Agenda items included SBAMA and SAC presentations on storage location of missiles and plans for the phaseout. Discussions were held on retention of certain missile sites, funding of the deactivation, and airlift of spare Atlas missiles. Alternative plans for storing the missiles envisioned: (1) Use of space at Mira Loma and Norton and at Plant Number 19 at San Diego, California, and (2) Storage of all missiles at Norton and Mira Loma. The first plan would require retention of Plant Number 19; the second, modification of warehouses 515 and 518 at a cost of $100,300, and would be contingent upon the availability of those two warehouses for storage. The storage involved: 82 Titan I's, 155 Atlas E's and F's, 27 Thors, and 18 Titan II's for a total of 282 missiles. The Thors and Titan II's were not involved in the deactivation program. Major attractions of the second plan were as follows: (1) Storage of the missiles would be centrally located, at Norton and Mira Loma, which would reduce overhead costs. (2) There would be one civilian detachment of 219 personnel, which would also reduce overhead costs. (3) Norton and Mira Loma were near Vandenberg AFB -- the launching facility. It was indicated at the meeting, and later verified, that the facilities at Norton

and Mira Loma were available for missile storage; USAF promised a decision by approximately 1 February 1965, as to the number of sites to be retained, in what configuration and at what level of preservation.[17]

At that meeting, Headquarters USAF requested AFLC and SAC to submit a new plan for the deactivation of the sites, and dismantlement and disposition of equipment. Headquarters USAF considered the joint plan presented at the 17 December 1964 Conference.

Two days later, General Mundell directed Colonel Hamrick to prepare a new plan.[18] When this was accomplished, AFLC reviewed it on 29 - 30 December 1964. On 31 December 1964, Headquarters AFLC sent copies to SAC and ATC for coordination and to the AMA's for their information,* and asked them to comment on the plan by wire.[19] On 6 January 1965, ATC concurred in the plan as it stood.[20] SAC proposed several minor changes on 13 January, and, on the following day, the plan was resubmitted to ATC with the incorporated changes.[21]

On 22 January 1965, General Mundell submitted the Phase Out/Disposition Plan to Headquarters USAF for approval. USAF did not formally approve this plan until 10 March 1965. In the meantime, however, the Deactivation Task Force (DTAF) operated on the assumption that it would be approved.[22]

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* ATC was asked for concurrence because one of its bases, Lowry AFB, Colorado, was a host base for missile sites.

The plan provided overall USAF direction and guidance, basic objectives, identified the weapon systems, and described equipment and facilities affected by the phaseout and deactivation. The plan provided site disposition policy instruction: it also provided basic assumptions and ground rules for the program; and last, but not least, assigned tasks for the various deactivation agencies.* It was tailored to realize a maximum dollar return to the Air Force and DOD.**

In other words, the plan provided a program and procedure for effective, orderly phaseout of the missiles and for disposition of operational system assets. It assigned specific responsibilities and tasks to Headquarters USAF, AFLC, SAC, Defense Supply Agency (DSA), the Defense Logistics Services Center (DLSC), host bases, and so forth. Among other things, the plan required AFLC to control the disposition process, to provide storage facilities for phased down missiles, and to fund and provide transportation management services for the movement of the missiles from sites to storage. Some SAC tasks included deactivation of ICBM Squadrons, establishment of a phaseout schedule by missile complexes, removal of missiles and save-list items from silos, and redistribution of excess items to other activities within SAC. Headquarters USAF

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*See USAF Plan of Action, 15 Aug 1965, for complete details, in Vol. II, Tab C, this study.

**Final approval of plan given 15 Aug 1965.

tasks included approval of the SAC phaseout schedule and provision of funds where funding was beyond major air command capabilities. One of DLSC's tasks was to publish illustrated brochures prepared from basic data provided by SBAMA and SAC, describing excess items of equipment. These were for use by DOD and other government agencies in determining what items they wanted and could use. Among other things, host bases were to provide administrative support, utility services, and site security.

SBAMA was deeply involved not only in the preliminary plan in the preparation, but also in each revision (30 December 1964, 20 January 1965, and 19 March 1965) and the final edition of 15 August 1965. In fact, SBAMA was the primary action agency responsible for revising the plan, providing technical information, preparing, coordinating, printing, and distribution of the plan.[23] When the plan was updated as of 15 August 1965, Colonel Robert L. Wells, Deputy Commander, ICBM Deactivation Task Force, informed AFLC about the 15 August revision. This revision provided for including Vandenberg Atlas E and F facilities (except 576a) and Titan I facilities (except the 395th Ground Guidance Station) in the phaseout program. It gave ATC and TAC host base responsibilities for task assignments. It outlined requirements for testing and removal of diesel generators of certain capabilities from silos. It provided for the use of service/salvage-type contracts for dismantling equipment in silos. And finally, it specified when the Site

Deactivation Task Force's (SDTAF) responsibility for any given site was to end.[24] A SBAMA Supplement to the 15 August 1965 USAF Plan of Action, dated 19 May 1966, encompassed policy and guidance incident to the termination of AFLC Executive Management Responsibilities (EMR) and transfer of Contracting Officer Representatives (COR) functions.*

AFLC Supply and Disposal Plan

AFLC had responsibility for disposition of equipment; executive management; disposition of systems assets, etc.** Complying with this responsibility, SBAMA prepared the AFLC Supply Disposal Plan.*** It was developed concurrently with the USAF Plan of Action.

The AFLC Supply and Disposal Implementing Plan for Phase Out of the Atlas E, Atlas F, and Titan I provided detailed guidance to support the USAF Plan. Although labeled an AFLC document, the plan actually provided procedures for all agencies involved. Essentially, this plan provided procedures for accomplishing the work and cited other procedural documents.**** The first plan was issued on 4 January 1965, with later issues dated 1 February, 1 July and followed by a final edition on 1 October 1965.ᵀ

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* See Vol. II, Tab C for details.

** See Vol. II, Tab A, for details of TWX AFCVC 96605.

*** AFLC Supply/Disposal Plan was joint effort of SBAMA, AFLC, SAC, ATC and DLSC personnel

**** See Vol. II, Tab C for details.

ᵀ See Vol. II, Tab C for 1 Oct 1965 Plan.

On January 1965, Headquarters AFLC distributed copies of the Disposal Plan to the AMAs for immediate implementation and by agreement to SAC and ATC for their guidance.[25] The plan was reissued on 1 February, with minor revisions. It was reissued on 1 July and was primarily concerned with contractual arrangements and procedures involved in the dismantlement of equipment at sites. SBAMA prepared the final issue on 1 October 1965. This plan superseded the 1 July 1965 AFLC plan.* The October issue added a considerable number of processing procedures and actions; such as, reimbursement for dismantling, packing, crating, handling, and transportation costs, and so forth.**

SBAMA Plan of Action

SBAMA wrote a general plan to further refine guidance contained in the USAF plan and the AFLC plan of actions for phaseout and disposition of Atlas E, F, and Titan I Weapon Systems.

The introductory parts of the plan of action were covered by USAF/AFLC plans. The purpose, directive, guidance, objectives, and assumptions, were reiterated in the SBAMA plan. This plan recapped previous milestones and established new ones.

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*See Vol. II, Tab C for plan dated 1 Oct 1965.

**See Vol. II, Tab C for plan.

***See Vol. II, Tab C for SBAMA plan of action.

In detail, the SBAMA plan provided a breakout of functions and responsibilities covering diesel generators, air conditioners, disposition/removal of Aerospace Ground Equipment (AGE)/Communications Electronics Meteorological (CEM)/Real Property Installed Equipment (RPIE), Weapon Systems Logistics Officers (WSLOs), funds, audit group, Program Management Center (PMC) Reports, technical assistance, and quarterly inspection.

SBAMA (SBGM) prepared the first plan dated 20 July 1965 and revised it in November 1965. After the initial plan (20 July 1965) SBGM held a meeting on 24 August 1965 at Norton, known as the Predisposal Planning Conference, during which major decisions and agreements were made concerning all aspects of the deactivation program. SBGM personnel revised the initial SBAMA plan, incorporating the results of the 24 August meeting, and published a revised plan in November 1965.*

It would be well to note that AFLC delegated the responsibility to SBAMA (SBGM) for developing the plans. SBAMA, therefore, not only developed the overall plans; but also submitted the majority of subject matter for inclusion in the plans.

In order to comply with the USAF Directive 96605, memorandum of agreements between commands (SAC, TAC, AFLC, and ATC) were needed. These agreements were concerned with major responsibilities and

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*Other plans contained in Vol. II, Tab C, pertaining to various segments of this history are found in Chap IV and VI, this study.

functions of the commands involved and the deactivation program.

On 16 January 1965, SBAMA/DTAF prepared an Interim Agreement, which was followed by the first approved agreement on 22 January 1965. SAC and ATC prepared the next major inter-command agreement on 26 February 1965. This agreement covered SAC and ATC command responsibilities relative to Titan I phaseout at Lowry Air Force Base, Colorado. On 2 April 1965, SAC and SBAMA jointly prepared a revision to the 22 January 1965 memorandum of agreement. On 1 December 1965, SAC, TAC, ATC, and AFLC jointly developed the final inter-command agreement. SBAMA updated the final inter-command agreement of 1 December 1965 on 15 March 1966. This agreement redefined the termination of executive management responsibility and assignment of Contracting Officer Representatives (COR).

The cooperation, assistance, and participation of the using commands had been excellent throughout the program. Memorandums of agreement between AFLC, SAC, TAC, and ATC to cover all major operations of the program were developed with minimum difficulty.*

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*See Vol. III, Tab A for Memorandums of Agreement.

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ORGANIZATION OF DTAF

Site Commanders - Locations

Numbers of Personnel at Each Site

Contractors at Sites

Cost of Construction of Sites

Chapter III

Organization of Deactivation Task Force

On 8 December 1964, Headquarters United States Air Force (USAF) directed the formation of a Deactivation Task Force (DTAF) to provide executive management for the program.[1] Executive management was assigned to the Air Force Logistics Command (AFLC).* In order to assure that the DTAF was adequately staffed with competent personnel, on 10 December 1964, AFLC established a central management office for deactivation at the San Bernardino Air Materiel Area (SBAMA/Norton Air Force Base). This activity provided logistic support for the Atlas E, F and Titan I weapon systems during the operational phase. AFLC appointed the SBAMA Deputy Commander, Colonel Hamrick, as the Deputy Commander (DTAF).

Concurrently, AFLC established the AFLC Intercontinental Ballistic Missile (ICBM) Deactivation Task Force, provisional, at Wright-Patterson Air Force Base (AFB) and attached it to Headquarters AFLC for operational control and to the 2750th Air Base Wing (ABW) for administrative and logistics support.[2]

Major General Lewis L. Mundell** immediately assumed command

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* See Vol. II, Tab A for message.

** Then AFLC's Director of Operations; on 1 Aug 1964, he became Vice Commander, AFLC, in the rank of Lieutenant General.

of the new organization; Colonel William L. Hamrick* was his Deputy.[3] Concurrently, the Deputy Chief of Staff, Systems and Logistics, had appointed Major General Harry E. Goldsworthy** to direct, control and coordinate ICBM deactivation efforts at the Headquarters USAF level. General Mundell commanded from Headquarters AFLC; Colonel Hamrick headed up the DTAF office at Norton AFB.

The Norton office was to be part of Headquarters AFLC's ICBM Deactivation Task Force and was to work with major air commands. The office at Wright-Patterson AFB was to consist of only four or five full-time members initially, with Lieutenant Colonel James D. Kelly in charge. Its functions were to: (1) Keep the Task Force Commander informed of progress; (2) Relay instructions; (3) Coordinate efforts; provide guidance; assist AFLC Staff activities in the deactivation process; and (4) Work with Headquarters USAF and major air commands when contacts were desirable from Wright-Patterson AFB.[4] The Norton office was designated the principle DTAF operating agency, with approximately 35 full-time personnel. They were to work with major air commands, other Air Materiel Areas (AMA's) and AFLC Staff Agencies.

There were several reasons for establishing the principal operation at Norton. SBAMA, at Norton AFB, was responsible for

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* Later Brigadier General, 30 Apr 1965.

** Director of Production and Programming, Dep Chief of Staff, Systems and Logistics, Headquarters USAF.

logistics support of the missiles being phased out. This included supply support, missile modification, engine overhaul, technical management of the missiles and their components, and so forth. The decision to make the missiles nonoperational reduced the requirement for many individuals engaged in maintenance and supply support. Consequently, highly qualified personnel became available to assist in the deactivation program.

Headquarters USAF's 8 December 1964 directive had sketched, in broad outline, the organizational setup and each command's area of effort for the phaseout. Organizational details and working arrangements were left up to AFLC and Strategic Air Command (SAC), with primary responsibility of AFLC/SBAMA.[5]

The two commands, AFLC and SAC, agreed to the following: The deactivation program would be accomplished in three phases. Phase I, the responsibility of SAC units, covered the removal and preparation for shipment of the re-entry vehicle, missile, classified components, excess mobile equipment, and SAC Save List, if any; and the disposal of propellants and gases. Custody of each site complex was to be turned over to the air base group or squadron when Phase I tasks were completed. Phase II, under the direction of an AFLC appointed executive manager, included the turn-off of all unnecessary power, the protection of equipment, and the maintenance of those systems that were to remain operable. It also involved the removal and disposition of organizational materiel

and equipment, communications-electronics-meteorological (CEM) equipment and Real Property Installed Equipment (RPIE). In Phase II, the AFLC executive manager was to be responsible for controlling all disposal processes relating to organizational materiel, including RPIE.* SAC was to furnish equipment and manpower to accomplish Phase II tasks. Phase III consisted of reporting sites to the General Services Administration (GSA) as excess and providing care and custody of the sites. The host support base was to provide the care and custody. Real property disposal actions in that phase were to be the responsibility of the GSA and the Corps of Engineers. Phase III would terminate when the custody and caretaker services were no longer required.[6]

Organizational arrangements agreed to were as follows: AFLC activated a Site Deactivation Task Force** (SDTAF) at each Atlas E, F, and Titan I host base, appointed a SDTAF Commander and a Weapon System Logistics Officer (WSLO), and established a technical staff of approximately four or five persons per base. AFLC also set up a Commander's Control Group at Norton to which each SDTAF Commander reported. SAC provided at each host base an officer to serve as deputy to the SDTAF Commander. The Deputy Commander, SDTAF, had a delegated authority to coordinate directly with base

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* Executive Management Responsibility (EMR) termination as revised by 19 May 1966 Supplement to USAF Plan of Action.

** Originally called the Site Inactivation Task Force.

activities for support of the deactivation program. Host bases provided administrative support, including office space and secretarial services.

The organizational and working arrangements described above lasted through 31 July 1965; but on 15 July 1965, Lieutenant General Kenneth B. Hobson*, Vice Commander, AFLC, proposed that the Headquarters AFLC ICBM Deactivation Task Force be disbanded, effective 1 August 1965, and that SBAMA be designated the organization to assume the responsibilities formerly carried out by Headquarters AFLC Task Force. The reason for these proposals was that the task had become primarily procedural and would remain so for the balance of the program.[7] On 22 July 1965, USAF agreed to the proposal.

SBAMA issued Special Order P-180 appointing the first eight SDTAF Commanders, on 28 December 1964. As the program progressed others were assigned or replaced. Dual assignments were possible, because Headquarters USAF directed that certain of the missile sites were to be retained in a freeze-hold status.

Each Site Commander exercised executive responsibility over contractors concerning dismantlement and removal of equipment at the missile sites.***

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*On 1 Aug 1965, was appointed Commander, AFLC, in rank of General.

**See Appendix 1, this study for complete list of Site Commanders.

***See Vol VI for charts listing contractors.

To show the magnitude of the deactivation program, consideration must be given to the cost per weapon including aerospace ground equipment (AGE), spares, training and communication equipment, assembly and checkout equipment, plus site acquisition and construction.*

Atlas E - $16,000,000
Atlas F - $18,000,000
Titan I - $26,000,000

* Information from Mr. Wesley Swanningson, SBGMAR, 2 Jun 1966.

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TIME PHASED PLAN AND SCHEDULE

Removal-Transportation-Storage

Preservation of Sites/Complexes

Screening and Reutilization

Disposition of RPIE and Real Property

Spares

Chapter IV

Removal - Transportation - Storage

The Strategic Air Command (SAC) was responsible for removing the missiles, the re-entry vehicles, cryogenics/gases, classified materiel, and selected save-list items. Prior to this, SAC was to establish and obtain Headquarters United States Air Force (USAF) approval for the schedule to remove the missiles. Air Force Logistics Command (AFLC) was to provide transportation management[1] services for airlift and commercial over-the-road movement of missiles from missile sites/host bases, and to insure the availability of missile trailers to meet AFLC/SAC shipment schedules. Strategic Air Command, Air Training Command, and San Bernardino Air Materiel Area were to provide[2] transportation coordination for timely missile movement. SBAMA developed data and submitted the basic information to AFLC concerning storage. These data were presented by SBAMA to Headquarters USAF on 17 December 1965.[3]

The preferred method was to transport the missiles by air. The SBAMA Commander strongly recommended that phased out Atlas E, Atlas F, and Titan I missiles be airlifted from missile sites because of the increased time and cost factors involving surface transportation.[4] SAC also recommended to Headquarters USAF that airlift be used.[5] General Mundell was in full accord with SBAMA

recommendation that phased out missiles be airlifted to the storage site.[6]

While it is true that transportation of missiles across the country would be a cheaper method by air, surface movement of missiles--although a more costly, difficult task--was the method used due to the grounding of the C-133 aircraft. Nine spare missiles were airlifted, but the remaining missiles had to be transported by surface.

Twenty-seven Atlas trailers and 10 Titan I transtainers* were available for the movement.[7] On 24 December 1964, Military Air Transport Service (MATS)** advised Headquarters USAF, AFLC and SAC that restrictions on C-133 aircraft usage and higher priority commitments on use of the remaining MATS fleet reduced the availability of airlift for missiles by 50 per cent.[8]

On 24 December 1964, General Mundell advised that personnel concerned with missile storage site selection had concluded that all Atlas, Titan I, and Thor missiles should be stored at Norton Air Force Base (AFB) and Mira Loma Air Force Station (AFS) and that five Titan II's should be stored at Norton. He questioned storage of the Titan II's operational missiles over which the Ogden Air Materiel Area (OOAMA) had responsibility. He asked the Air Materiel Area (AMA) Phase Down Group to look into the matter. One of the five Titan II's had already arrived at SBAMA.[9]

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* Specialized trailers built to handle the Titan I.

** Name changed to Military Airlift Command (MAC), 1 Jan 1966.

On the basis of the findings of the Air Staff, Secretary of the Air Force, Eugene M. Zuckert, recommended to the Secretary of Defense the following actions: (1) Store all missiles for use as Research and Development (R&D) boosters. First year cost would be $3.1 million. (2) Dispose of the Atlas E sites since they were too soft. (3) Dispose of Atlas F and Titan I sites adjacent to support bases which were phasing out--Larson, Lincoln, and Schilling AFB's. Total cost would be $5.3 million. (4) Retain and preserve the remaining sites--44 Atlas F and 15 Titan I for evaluation of possible potential Air Force missions. First year cost would be $8.8 million.[10]

General Mundell directed Colonel Hamrick on 24 December 1964, to proceed with arrangements for the air movement of spare Atlas missiles from SAC bases to Norton AFB for storage.[11]

Three days later, SBAMA message SBVD 86618 listed the missile airlift schedule by bases. This message was followed by SBAMA message SBGM 51001 which revised the spare missiles airlift.* Prior to the SBAMA's revised schedule, Headquarters USAF message AFSPDB 73328, dated 28 December 1964, directed that plans be made for surface transportation of the Atlas E, F, and Titan I missiles. It authorized a limited amount of airlift.[12]

On 30 December 1964, SAC message DPLC 07717 established the

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* See Vol. V, Tab A of this study for message.

first removal and transportation schedule for Atlas and Titan I missiles.[13]

Six days later, on 5 January 1965, SBAMA message SBSP 78508 established a new schedule for transporting missiles.[14]

Early in the transportation planning phase, SBAMA (SBNE) engineers examined the design of the Titan I transtainers and concluded that the transtainers would not survive long hauls across the country during the winter months. To gain an early indication of the Titan I transtainers performance over the road, SBAMA's Colonel Hamrick worked out an agreement with SAC which provided for AFLC and SAC placing a qualified transportation technician aboard each convoy for the initial Titan I missile move from Beale AFB, Larson AFB and Ellsworth AFB. The enroute reports from these convoys substantiated earlier evidence that the Titan I transtainers would be difficult to maintain during highway movement.[15] The main problems were leaky hydraulic systems and trailer wheel mounting design which caused the inside tires to blow out due to riding on the lip of the highway and supporting the weight normally supported by two wheels. To resolve this problem, SBAMA engineers designed and tested special bucks (supports) which would support the Titan I missiles on commercial flatbeds. Thus the remaining Titan I's were transported by this method with commercial haulers. Another method using government flatbed trailers was engineered and tested but did not prove feasible.*

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* Information from Maj Adolph Palma, Mil. Engr., SBCMAT, SDTAF.

While major commands were making high level transportation decisions, SBAMA was establishing management control procedures. SBAMA established a single point control for missile movement with Mr. Robert Dabow in control.[16] In coordination with the SBAMA Deactivation Task Force (DTAF), Mr. Dabow's office established a Standing Operating Procedure (SOP) regarding enroute problems. This SOP provided a method for reporting enroute problems and the method of obtaining corrective actions through the appropriate DTAF agency.[17]

The SBAMA Directorate of Supply and Transportation (D/ST) and Directorate of Maintenance (D/M) jointly established a procedure to cover SBAMA actions during receipt, delinquency, and dispatch of missile trailers as they arrive at Norton and Mira Loma.[18]

The D/ST and D/M also established a method of providing a two hour advance notice of arrival of each missile to assure prompt off-loading of missiles and recycle of missile trailers through the SBAMA D/M Depot Shops.[19]

SBAMA D/ST designed and fabricated shipping containers to protect Atlas guidance components during shipment.[20]

With knowledge that the Atlas trailers were not in the best condition, maintenance wise, SBAMA established a procedure whereby each Atlas trailer was recycled through the SBAMA D/M depot shops for inspection, servicing, and necessary repair upon arrival at Norton immediately after off-loading of the missiles

at the storage point. This procedure provided completely serviceable Atlas trailers for return to SAC bases to pick up and transport other missiles.[21]

In addition, the SBAMA D/M established mobile maintenance teams to support Atlas and Titan I trailers that may require emergency maintenance beyond the escort team capability during transportation of missiles to storage areas. These teams were on call anywhere within the Continental United States.

SBAMA, in coordination with SAC, established missile movement schedules which were sufficiently flexible to allow management control and still meet the overall schedule. SBAMA coordinated all missile movement directly with SAC squadrons. In addition, SAC established a liaison office at SBAMA. Lieutenant Colonel Jacobs coordinated missile movements for SAC.[22]

The Project Management Center (PMC/DTAF) established a reporting method and installed status boards in the DTAF chart room which provided information on location and status of each missile throughout the trip. The PMC carefully monitored each trip to assure smooth operation, legal compliance, and arrival of each convoy at a suitable parking place before each nightfall.[23]

SBAMA engineers (SBNE) developed procedures and established materiel requirements for the preservation and maintenance of both Atlas and Titan I missiles to be used during transit.[24]

In addition to surface highway transportation, SBAMA studied and investigated other methods of transporting missiles. Transportation Support Division (SBSP) and Ballistics Systems Division (BSD) studied the possibility of using Minuteman railcars for transportation of Titan I missiles. SBSP also studied the possibility of using standard railcars for movement of Titan I's. The studies included consideration of transporting Atlas missiles from Plattsburgh AFB, New York, by water via the St. Lawrence River. None of these methods proved to be feasible.[25]

In spite of the best managerial planning efforts for missile movement, several incidents occurred during transit of missiles. For example, four accidents involving trailers and/or missiles transported by Dealers Transit, Inc., were:

1. The first incident was at Lordsburgh, New Mexico, while pulling an empty trailer into a gas station. The tillermen were not in the cab when the driver decided to move the vehicle. He hit a butane tank causing a fire and damaging the tillerman position and surrounding area.

2. The second incident was tillerman error at Warren AFB on 20 Jan 1965. He was inexperienced in the handling of the equipment and when leaving the installation did not allow enough clearance for a righthand turn and hit the gate and fence post with the No. 1 propulsion unit. Connectors to the regulator were broken off, the oil tube tank was dented at the leading edge and cooling tubes to the No. 1 thrust chamber were damaged.

3. Incident No. 3 was at Carrizozo, New Mexico, on 27 Jan 1965 when a Volkswagen attempting to pass the trailer swerved into the side of the missile trailer. While it is assumed that the Volkswagen driver may have

been responsible, no report has been received as to what the follow-on car, indicating a wide and long load, may have done to prevent this accident.

4. Incident No. 4 was another tillerman error at Linden, Kansas, on 27 Jan 1965. While crossing a bridge 5 miles south of Linden, Kansas, the tillerman allowed insufficient clearance, causing a sideswipe of the bridge, resulting in damage to a liquid rocket engine.

NOTE: Total costs for all accidents listed above cannot be assessed until such time as missiles and trailers involved can be completely checked out and parts and labor are computed.

In the foregoing narrative the author pointed out the basic policy as to command responsibilities regarding transportation; methods by which movements were to be made; storage decisions and future use missiles; schedules of transportation; and SBAMA's participation in the planning phase for movements and monitoring.

At this point, on 6 January 1965, SBAMA was ready to start over-the-road commercial transportation of the Titan I missile.[26] At the same time, the Titan I missile was being transported by the road, there were a limited amount of airlifts authorized.[27] However, on 28 December 1964, Headquarters USAF directed that plans be made for surface transportation of the Atlas E, F, and Titan I missiles.[28] On 6 January 1965, Headquarters USAF directed that airlift was to be cancelled except for missiles removed from Plattsburgh, Fairchild, and Larson sites.[29]

AFLC message requested substitution of Warren and Forbes sites, in lieu of Plattsburgh and Fairchild from which missiles would be

airlifted. Thus, USAF authorized airlift for Warren, Forbes, and Larson.[30]

SBAMA Reported on 7 January 1965 to Headquarters AFLC that two Atlas E's and five Atlas F's had been airlifted to Norton AFB for storage. This airlift had been previously authorized by USAF.

The SBAMA Office of Information announced on 22 January 1965, that Atlas and Titan I missiles had started to arrive at Norton AFB. The surface transportation to the site, including trailer maintenance, missile loading, and return to Norton--required approximately 21 days. Timing of the operation was important because most highway laws required that travel be scheduled during daylight hours; some permitted travel only during off-peak traffic.[31]

The movement of the missiles from sites to storage points was to be completed during third and fourth quarter of Fiscal Year (FY) 1965. On 4 February 1965, SBAMA DTAF submitted an estimate for funds required in the amount of $1,266,813 for transportation of Atlas E, F, and Titan I missiles from sites to Norton. Broken down, this represented expenditures of $639,400 in the third quarter of FY 1965.[32]

Colonel Hamrick, Deputy Commander, Site Deactivation Task Force (SDTAF), assured General Mundell that the transportation costs would not exceed the estimates submitted on 4 February 1965. Colonel Hamrick's message read:

> By careful transportation planning and constant vigilance over movement of missiles, transportation costs would not exceed estimates.

As of 24 February 1965, Norton AFB received 90 missiles and one was enroute from Schilling AFB. Sixty-seven missiles remained to be moved of the 158 total number of missiles.[33]

On 26 March 1965, the AFLC Directorate of Transportation submitted a breakdown of the basic and additional charges, to General Mundell. This breakdown was presented by bases, which could be applied by the carrier for movement of the Atlas and Titan I missiles to storage. The actual charge was a combination of the basic rate plus additional charges for special conditions.*

The Deputy Commander of SBAMA Deactivation Task Group reported to Headquarters DTAF on the total estimated cost of surface movement of Titan I and Atlas missiles. This information was based on data supplied by the carriers. They furnished the management group figures on the actual charges they were billing the Government. These charges could change as a result of audits by the carriers and the Interstate Commerce Commission. The cost, as reported by the carriers, was $1,122,996. This was within the $1.3 million the management group had originally estimated for surface transportation.

Colonel R. L. Wells' report to General Mundell stated that "This latest information is passed on to you as a final report on transportation expenditures for missile movement...."**

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* Memo, R. J. Kaufman, Aerosp Sys Transp Office, to Comdr, DTAF, dtd 26 Mar 1965, in AFLC Study 350, p. 86 - 87, Item 209.

** See Vol. V, Tab I for SBGM Ltr to Hq AFLC DTAF, Subj: Cost of Surface Movement of Titan I and Atlas Missiles, dtd 16 Jun 1965.

The first missile complex to transfer all deactivated Intercontinental Ballistic Missiles (ICBM) to Norton AFB was Walker AFB, New Mexico. The last Atlas from Walker arrived at Norton on 12 February 1965, at 3:30 P.M. Later in the same day, the last Titan I from Beale AFB arrived which placed Beale in the second place to transfer all deactivated Titan I's.[34]

All missiles were removed and in transit to Norton as of 15 February from six missile sites. Of these, two were Titan I bases, Larson and Ellsworth AFB's, and four Atlas bases: Warren, Forbes, Altus and Dyess AFB's. There were five remaining AFBs still having missile sites to be deactivated. Of these, Fairchild, Lincoln, and Plattsburgh were Atlas sites and Lowry and Mountain Home AFB's Titan I sites. It is noteworthy to mention that the ICBM deactivation program was substantially ahead of schedule on 15 February 1965. On 19 February 1965, SAC and SBAMA jointly concurred to accelerate the missile movement schedules, except for Plattsburgh.[35]

AFLC message to the Chief of Staff explained that Headquarters planned to move the missiles from Plattsburgh AFB by C-133 aircraft. However, the grounding of C-133's, the build up of priority traffic at Pacific ports, and the success of surface movement of Atlas missiles lead to re-examination of the airlift transfer plan. Although the Plattsburgh missiles were scheduled for movement in the fourth quarter of FY 1965, SAC could make them available for

movement immediately. Therefore, AFLC proposed to begin the surface movement of missiles out of Plattsburgh as early as possible. The additional costs to be incurred by surface movement would be approximately $42,000.* On 9 March 1965, the Chief of Staff of the Air Force (CSAF) approved the plan to surface move the Atlas missiles from Plattsburgh AFB to Norton AFB.** On 11 March 1965, SBAMA established a new and final revised schedule for missile pickup from Fairchild, Lincoln, Plattsburgh, and Mountain Home AFB's.***

By 8 April 1965, there was sufficient evidence that the movement of Titan I and Atlas missiles by surface means was proceeding ahead of schedule. Of the total 158 missiles, only nine would have been moved by air for storage at Norton AFB and Mira Loma AFS.

General Bradley, AFLC Commander, complimented SBAMA DTAF on its efforts to move and store the phased out missiles. He stated that the movement of 158 Atlas and Titan I missiles marked an important milestone in the ICBM deactivation program.**** Thus, the first phase of the Atlas and Titan I ICBM deactivation program was completed when the last missile arrived at Norton on 29 April 1965 at 7:00 P.M. That constituted completion

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* AFLC msg MCGM 23592 to CSAF, info to SBGM and DPLC, dtd Mar 1965, in Vol. V, Tab D, this study.

** See Vol V, Tab D, for CSAF msg.

*** SBAMA msg SBGM 50016 referenced in AFLC Study 350, p. 80, Item 192.

**** Comdr AFLC Ltr to SBAMA, Subj: Missile Deactivation Task Force, dtd 27 Apr 1965.

of missile movement almost 30 days ahead of schedule. In all, 158 missiles were moved, 149 of which were transported by surface means. The successful completion of that task was attributed directly to the coordinated efforts and teamwork of the major commands involved.[36]

To briefly summarize the missile transportation effort we may conclude with the following:*

> Significantly, the SBAMA Deactivation Task Force at Norton Air Force Base (SBAMA DTAF) through careful transportation planning stayed within the estimated funds authorized for this purpose. In addition, the modification of commercial flatbeds to accomodate Titan I missiles and the extremely competent and timely overhaul of each Atlas trailer after each trip from the base to Norton AFB contributed greatly to the success of the missile movement. Faced with such odds as: (1) Moving a large number of missiles in a short period of time by surface transportation. (2) Establishing overhaul recycle capability for trailers on extremely short notice. (3) Moving during the worst winter weather. (4) Modifying flatbeds to overcome the problem of moving Titan I missiles. (5) Moving all but nine missiles by surface over a total of 218,700 miles, with no serious accidents or incidents and completing the job ahead of schedule.

Storage of Missiles

Headquarters USAF, AFLC and SAC representatives met in Washington on 17 December 1964. SBAMA made the presentation on storage locations of missiles and plans for the phaseout. The conferees actively considered two of three projected plans. One envisioned storing 82 Titan I missiles at Mira Loma (SAC Area),

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* See footnotes throughout this chapter to substantiate summary.

30 Atlas missiles at Norton AFB, and 125 Atlas missiles at Air Force owned Plant #19 at San Diego, California. It also envisioned storing 27 Thors at Mira Loma, 13 Titan II's at Norton, and 5 Titan II's at the Ogden Air Materiel Area (OOAMA).* The other plan called for storing all of the missiles at Norton and Mira Loma. The total cost of the first plan was figured at $3.87 million for the 4-½ year storage period. Cost of the second plan would not vary significantly from that figure.

The first plan appeared best if contract support of the stored missiles was used. Although the Air Force had offered to sell the Plant #19 facility to General Dynamics, no response had been received from that firm; and, presumably, the offer could be withdrawn if the facility was needed. Organic maintenance could, of course, be performed at Plant #19, but at some disadvantage.

If stored missiles were to be maintained organically, the second plan appeared to be best. Norton and Mira Loma were so close that they were, in effect, one centralized location. One civilian detachment, rather than two, could be used, thus assuring less overhead cost. Also, there was another advantage inherent in the second plan: Vandenberg AFB, an Air Force launching facility for space research, was not far away; hence, all missiles would be readily available to Vandenberg as sub-orbital boosters in the

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* The Thors and Titan II's, although not phase out missiles, had to be considered in the storage decision.

space program.

Further, warehouses at Mira Loma, under the jurisdiction of the 15th Air Force and March Air Force Base, would not be required by SAC units within the forseeable future. And as for Norton AFB, there was no projected usage by flying units there, except for a possible MATS unit in 1968--and that had not been approved. None of the conferees could project any requirement for the maintenance and other facilities that would be occupied by missile storage at Norton.[37]

Once the decision was made to maintain the missiles organically, the die was cast. The second plan was chosen.[38]

USAF message AFSPDB 73328 established a personnel ceiling of 219 people for FY 1965 for performing the Atlas and Titan I storage functions.

SBAMA developed storage maintenance procedures at Mira Loma and Norton AFB. These procedures were outlined in SBAMA message SBGMA 51035 on 17 February 1965.* SBAMA maintained storage of the missiles from the time they arrived at Norton and Mira Loma, until 12 February 1966, when the Sacramento Air Materiel Area (SMAMA) Detachment 43 assumed the responsibility.[39]

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* See Vol. V, Tab C, this study for details in SBAMA msg 51035, dtd 16 Feb 1965.

Missile Site/Complex Preservation

As early as 28 September 1964, even before the Department of Defense's (DOD) decision to phase out the Atlas E, F, and Titan I, General Gerrity created an Air Staff Study Group to study and evaluate potential Air Force uses for phased out ICBM facilities. On 16 November 1964, the group recommended that 59 sites--44 Atlas F and 15 Titan I's should be retained in a preserved status while an evaluation was being made of possible uses for the facilities.[40] Following the DOD announcement of phaseout of the Atlas and Titan I missiles in November 1964, USAF directed by message number 96605, dated 8 December 1964, and by USAF Plan of Action, that all deactivated Atlas and Titan I sites/complexes were to be placed under adequate environmental control after removal of the missiles. The task of assuring this site/complex environmental control was assigned to AFLC.[41]

On 15 January 1965, USAF message AFSPD 7727 directed retention and preservation for an indefinite period of all sites/complexes except those at Larson, Schilling, Lincoln, Fairchild, Forbes, and Warren AFB's. Disposal actions at these excepted sites were directed to begin immediately. Also, in the interest of economy and reliability, commercial power in lieu of diesel generator power was to be installed at all preserved sites.[42]

Headquarters USAF provided AFLC, SBAMA and SAC with information on the headquarters' thinking and planning regarding

retention of the Atlas F and Titan I missile complexes. USAF stated that, by preserving in-place equipment and placing the selected Atlas F and Titan I sites in a storage status, it was intended to provide the time necessary to evaluate, in considerable detail, whether or not there were new Air Force missions that could be accommodated in those facilities. The cost to "mothball" the facilities until July 1966 would be slightly less than $9 million--a nominal sum when compared to the "brick and mortar" estimated value of those facilities at approximately $500 million to $800 million. Headquarters said that the Air Force should attempt to match current or future Air Force missions to those facilities, based on the attractions of hardness, self-sufficiency, and dispersal. There were no plans to retrofit a new ICBM weapon system into those facilities. It was more than probable, Headquarters USAF indicated, that selected facilities would be individually converted, based on geographical locations, to several types of missions unrelated to ICBM's. USAF stated that the cost to dismantle and remove the "incomplex" Aerospace Ground Equipment (AGE) and ICBM-support Real Property Installed Equipment (RPIE) would be expensive and a waste of effort in view of the unmarketability of such items. Therefore, the most desirable and efficient, as well as the cheapest method of preserving the basic characteristics of the complexes was preservation of all installed equipment within the complexes and planning for minimum caretaker requirements for an unknown number

of years. USAF stated that the maximum degree of initial preservation, preparation, and cocooning activities should be applied to insure reduced numbers of follow-on caretaker personnel and reduction of daily maintenance needs at those facilities. Priority effort should be directed toward the preservation and safeguarding of the desirable self-sufficiency characteristics of those facilities. Economical and reliable commercial power should be used in place of expensive-to-use diesel generators which were to be stored. A small number of caretaker personnel should be employed on a 40-hour-week basis to operate sump pumps, to insure that heat and facility environmental equipments were functioning as necessary, and to provide corrosion control and custodial care of the property. Headquarters advised that DOD had provided money and personnel spaces for the retention program.[43]

The SBAMA DTAF developed the preservation procedures for all Atlas and Titan I deactivated sites/complexes. The procedure covered every phase of equipment preservation utilizing either commercial or diesel generator electrical power. Development of preservation procedures by the SBAMA DTAF was a difficult task due to requirement for critical environmental control of temperature, humidity, dew point, and the consideration of the wide variances of those conditions in underground silos, some of which were geographically located in a hot, dry climate and some in a humid, wet climate. The principle of the preservation technique was circulation of hot air throughout

the complex to reduce moisture to an acceptable level. Also, the relief of all high pressure from the various systems, the use of special preservation material on otherwise unprotected surfaces, the use of special preservative oil in the diesel generators, and the use of vinyl draping material to protect equipment from condensation and dirt were major requirements in the preservation plan.[44]

There were four different preservation procedures: (1) Interim Technical Procedure (ITP) number A-100-Atlas "E" Extended Preservation Procedure which placed the entire site in storage configuration. (2) ITP-A-108-Atlas "F" Extended Storage/Preservation Procedure for those Atlas F sites being operated with diesel generators as a source of electrical power. (3) ITP-A-109-Atlas "F" Indefinite Storage/Preservation Procedure to be used for those Atlas F sites where commercial power was available. This ITP-109 procedure was the final procedure used since all Atlas F sites were eventually placed on commercial electrical power. A major problem peculiar to the Atlas F site preservation plan was the need to secure the Atlas F silo cribs in a vertical position to facilitate removal of all cryogenics from site storage tanks. To resolve this problem, SBAMA DTAF designed Stanchion Spacer Plates to hold the crib support springs in a stable position. These Stanchion kits were manufactured by the SBAMA D/M shops, prototyped in the field by SAC personnel, and installed by SAC military personnel in the remaining Atlas F sites.[45]

(4) ITP-T-101-Titan I Preservation Procedure which provided for placing the complexes in extended preservation utilizing either diesel generators or commercial power.[46]

These preservation procedures were prototyped by a joint SBAMA/SAC team along with corrosion personnel from Mobile Air Materiel Area (MOAMA), communications personnel from Ground Electronics Engineering-Installation Agency (GEEIA), and various contractors.* Following the prototype effort, these procedures were disseminated to the field for use in preserving the sites. The task of preserving the sites was accomplished with military personnel from SAC/ATC/Tactical Air Command (TAC).[47]

In order to determine the adequacy of preservation procedures once they were performed, the SBAMA DTAF scheduled periodic inspections for each site. These inspections were performed by SBAMA DTAF teams.[48]

The Air Staff Study Group pointed out as early as 28 September 1964, the need for preserving sites for future use.

After the DOD announcement of phaseout of missiles and sites, USAF directed that all deactivated sites would be placed in the environmental control status.

AFLC/SBAMA was charged with accomplishment of environmental control responsibilities.

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* See Chapter VI for detail on prototyping.

Later USAF directed that certain selected sites be placed in extended preservation status.

SBAMA DTAF developed the preservation procedures. SBAMA, jointly with SAC, performed prototype of preservation procedures. Military personnel from SAC, TAC and ATC performed the preservation tasks at the sites.

To determine the adequacies of preservation procedures, SBAMA established and performed quarterly inspections.*

Reutilization and Screening

On 28 September 1964, even before DOD's decision to phase out the Atlas E, F, and Titan I, General Gerrity** created an Air Staff Study Group to study and evaluate potential Air Force uses for phased out ICBM facilities. On 16 November the group recommended that 59 missile installations--44 Atlas F sites and 15 Titan I complexes--should be retained in a preserved status while an evaluation was being made of possible uses for the facilities.***[49]

Between 28 September 1964 and 31 July 1965, the major air commands explored possible uses they could make of the phased out

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* Documentary evidence is quoted in footnotes, this chapter on preservation.

** Lt. Gen. Thomas P. Gerrity, DCS/S&L, Hq USAF.

*** There was one launch facility for each Atlas F site and three launch facilities per Titan complex, making a total of 89 launch facilities to be retained.

facilities. AFLC's efforts along this line began late in October 1964. On the 26th and 27th of that month, command representatives toured Lowry and Warren AFB's to determine whether AFLC could adapt and use Atlas F and Titan I sites/complexes for accomplishing existing or projected AFLC missions. They expressed the opinion that the command could not feasibly use the sites/complexes.[50] On 3 November, AFLC confirmed that opinion. The command stated that costs involved in refurbishing the facilities for storage of materiel, and in operating and maintaining them in remote areas, made their usage both uneconomical and impractical.[51] And with the 19 November Office of the Secretary of Defense (OSD) announcement of phase down and phase out of certain AFLC activities, the infeasibility of using ICBM sites/complexes became even more apparent.[52] Nevertheless, the command did not stop there. It continued to explore possibilities of using the sites. For instance, it investigated the use of Titan I complexes at Beale AFB, California for storing ammunition. On 13 June 1965, the 2705th Airmunitions Wing, Hill AFB, Utah, reported to Headquarters DTAF that restrictive regulations governing the storage of explosives, plus the expense involved in preparing Titan I facilities for such storage, made the proposed project a questionable one.[53]

Perhaps AFLC's greatest effort along that line was its investigation of the possibility of using Atlas F sites for storing first generation Minuteman missiles. On 21 January 1965, the

Boeing Aircraft Company made a presentation at Headquarters USAF on the possible use of Atlas F silos for storing the Minuteman. Boeing estimated that 24 Minuteman missiles could be stored vertically in one silo at an approximate cost of $300,000 per year.[54] On 4 February, Headquarters USAF asked AFLC to make a feasibility study.[55] On 18 March, OOAMA and SBAMA (SBNE) initiated the engineering feasibility study at Vandenberg AFB.[56] Although no firm decision on this matter had been announced, as of 15 September 1965, it appeared that surplus Minuteman missiles would be stored by other means.

On 15 September 1965, the following five Titan I facilities and one Atlas F site were being retained for stated major command missions:[*57]

Command	Mission	Site
SAC	Survivable, reconnaissance data processing center	Titan I, Lowry AFB, Colo. (Elizabeth)
AFSC	Space tracking station	Titan I, Lowry AFB, Colo. (Bennett)
AFSC	Space tracking station	Titan I, Mt Home AFB, Idaho (Oreana)
AFSC	Space tracking station	Atlas F, Lincoln AFB, Nebr. (Avoca)
AFSC	Large Payload Test Vehicle (LPTV) Launcher	Titan I, Mt Home AFB, Idaho (Bruneau)
MATS	Western Division Alternate Command Post	Titan I, Beale AFB, Calif. (Chico)

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* Rpt No. 3 (FINAL), Atlas E, F and Titan I Fac. Util. Proposal, by Air Staff Study Gp., 15 Sep 1965.

This represented the concerted and painstaking efforts of the Air Staff Study Group and others to find uses for those expensive facilities.

The Air Force had to exhaust every possibility of uncovering Air Force missions which could be economically and cost-effectively supported by the facilities. It was just good business to do so, and anything less than the best effort would invite criticism. The fact of the matter was that those highly specialized facilities were constructed for just one purpose--if need be, to launch intercontinental ballistic missiles. And their remoteness and relative inaccessibility had been considered assets for that special mission. After the Air Force has indicated its requirements for continued use and retention of the missile facilities, the remaining sites are submitted to GSA for reutilization screening action to determine possible uses by other Federal agencies, State agencies, schools, universities, and colleges. Sites required by those other agencies are put in a "retained" category until they can be turned over to the recipient; however, obligated (save list) items are removed prior to transfer of the site to any recipient. Examples of sites already designated to other agencies are: Forbes Site "2" is designated to go to the Federal Aviation Agency (FAA) for operation and records use; Warren Site "8" to the National Science Foundation; Warren Site "9" to Colorado State University, and Forbes Site "7" to Kansas University Engineering School. The reutilization of missile

launch facilities by these agencies and schools fulfills their needs.[58]

Reutilization of Equipment

Screening

Much of the equipment at Atlas E, F, and Titan I sites was needed elsewhere within the Air Force and other Government agencies. It was good equipment--like new, in most cases--and much of it was very expensive. Here was an opportunity to save tax dollars on a grand scale and the Air Force was determined to take full advantage of it. Beginning in December 1964, Federal agencies screened their requirements for materiel against equipment lists and descriptive brochures and sent their requisitions for needed equipment to SBAMA. For the most part, screening was completed on target--31 July 1965. However, the screening period was extended to 15 October 1965, and in some instances screening went beyond that date.[59]

To help the Air Force and other agencies in their equipment screening, an Atlas F site near Lincoln, Nebraska, was dismantled and the equipment was displayed at Lincoln AFB. This will be discussed later under a separate topic heading.

For the most part, screening was done within a procedural framework developed by DTAF in cooperation with Headquarters USAF General Services Administration (GSA), and SAC. Large diesel generators and air conditioners, however, were handled in an

exceptional manner outside that framework. Those items, too, will be discussed at a later point.

Vehicles, also, were requisitioned and redistributed outside DTAF's screening and redistribution procedures. Since they were not considered part of the weapon system packages, their disposal was governed by the provisions of Air Force Manual (AFM) 67-1, which required commands having excess vehicles to report them to Warner Robins Air Materiel Area (WRAMA), inventory manager for such equipment. Air Force agencies needing vehicles requisitioned them from WRAMA. Vehicles which became excess to Air Force needs were turned over to GSA.[60]

Although screening was started in December 1964, as indicated previously, a large share of it was done during June and July 1965. In the interval between December and June, the Air Force, in conjunction with other agencies, made four highly important decisions relative to the screening process. Two of these would facilitate screening. The other two would assure increased equipment utilization.

One decision proposed by DTAF on 27 April and subsequently concurred in by all screening agencies required the concurrent screening of brochures by all DOD agencies. Normally, screening, redistribution of assets, disposition of surplus equipment, and acceptance of real estate by GSA would take 15 months. Joint screening actions and review of available equipment by GSA, Defense Supply Agency (DSA), and all other DOD agencies would compress that schedule considerably.[61]

Another decision had to do with screening of assets against requirements at sites earmarked for indefinite retention. Headquarters USAF favored elimination of asset screening at those sites, and particularly at the Titan I sites. AFLC, however, recommended otherwise. The command position was that such a procedure would prolong screening and requisitioning beyond the 31 July deadline. The command also felt that the freeze-hold on those facilities would likely be lifted before 31 July. AFLC pointed out that, if some or all of the sites currently frozen were not released by that date, action could be taken to withdraw availability of the assets. The decision was made on 26 January to screen assets at all of the sites, including those in a freeze-hold status.[62] The SBAMA Task Force had been designated to monitor and control redistribution of all assets throughout the Federal Government and to authorized donees.

A third decision concerned selective retention of high-cost, specialized materiel not immediately needed by the Air Force but for which future requirements could be projected. Many items of that description had become surplus as a result of the phaseout and, unless something was done to prevent it, they would be turned over to GSA as surplus. As things then stood, requests for equipment were limited to approved programs. Both SBAMA and the Air Force Systems Command (AFSC) urged adoption of the selective retention philosophy for computers, oscilloscopes, recorders,

packaged communications equipment, and other high-cost, highly technical items. SBAMA recommended that AFLC develop policies and procedures immediately to permit selective retention of high-cost, potentially useable materiel such as microwave equipment. The accelerated phasedown of launch complexes was resulting in the generation of massive excesses of valuable equipment for which there was no immediate requirement. This residue of equipment was destined to be turned over to GSA as surplus, because, as things then stood, utilization was limited to existing, approved programs. It was highly probable that potential programs would develop requirements for this equipment. Examples of such future programs included one for redesign of certain launch complexes at Vandenberg and one for expanding the tracking and communications network at the Atlantic Missile Test Range.* Planned military construction programs would also generate requirements for expensive surplus equipment. The SBAMA Commander said such policies and procedures should be restrictive enough to assure that retention costs would be less than the cost of new procurements.[63]

General Mundell requested that AFSC make known all of its requirements for excess materiel from Atlas E, F, and Titan I sites by 31 July 1965. AFSC's requirements were to be submitted in two categories, as follows: First, requirements for approved programs;

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* Later known as the Air Force Eastern Test Range (AFETR).

second, requirements for the programs awaiting approval or currently in a study phase, or other potential programs. Requirements for both of the above categories were to be accumulated by the Norton office through 31 July.[64]

General Mundell submitted to USAF an AFSC recommendation and an ICBM Deactivation Task Force proposal concerning certain equipments slated for removal from deactivated missile sites. AFSC had recommended extending the current plan to include high-cost and easily removed components such as computers, oscilloscopes, recorders, and package communications equipment to assure maximum utilization of the equipment. In line with this recommendation, DTAF proposed that all major air commands submit requirements for those items in two categories, as follows: First, requirements for approved programs; second, anticipated requirements for programs awaiting approval or currently in a study phase, or for other potential programs. The general philosophy for redistribution would be as follows: (1) Systems would be offered as complete systems. Individual components of systems would not be available for potential requirements until it was definitely determined that the complete system would not be required or could not be used or modified for use as a complete system. (2) Priority considerations for systems spares that were excess to Air Force needs would be available to other agencies using complete systems. General Mundell proposed, further, that the above provisions be part of the

instructions to be included in brochures published and distributed by the Defense Logistics Services Center. He asked for USAF concurrence in these proposals.[65] Headquarters USAF approved.

The fourth decision concerned disposition of AGE spares and RPIE spare parts which were applicable to end items requisitioned. On 15 May, SAC proposed that such spares and spare parts be offered to agencies requisitioning AGE and RPIE end items. This, SAC stated, would assure their greater reutilization, with a substantial saving in procurement dollars.[66] On 25 May, the Defense Logistics Services Center (DLSC), SBAMA and Headquarters AFLC agreed to SAC's proposal. Together with SAC, they decided as follows:[67]

(1) SBAMA would determine the applicability of AGE spares to end items, insofar as possible.

(2) SBAMA would offer those to recipients of end items of AGE.

(3) SAC and ATC* would determine, insofar as possible, the applicability of spare parts to end items of RPIE.

(4) SAC and ATC would furnish that information to SBAMA.

(5) SBAMA would offer those spare parts to recipients of RPIE end items. Considerable manhours and machine time were expended in establishing control files of spares application to end items to accomplish the above; however, none of the agencies requisitioning end items obtained spares through this method.

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* ATC was asked for concurrence because one of its bases, Lowry, was a host base for missile sites.

Screening was performed in two periods: pre-brochure and post-brochure. To about mid-May 1965, the pre-brochure period, the Inventory Manager (IM) AMAs matched Air Force programmed operational requirements against equipment lists furnished by System Support Managers (SSM). The Directorate of Supply, AFLC, directed the AMA's to establish local missile deactivation task groups composed of requirements and engineering technicians. Each AMA group was to assure comprehensive screening of ICBM deactivation assets to the maximum extent possible for other programmed requirements. The AMAs would have an opportunity to select complete systems prior to publications of brochures. When the brochures were distributed for their reviews, the AMA's would have first priority for required components of complete systems if they identified their requirements for those components and if the complete systems were not required by another Federal agency.[68] DTAF reported that the screening of property remaining at the bases servicing the missile sites would be done concurrently by all government agencies by means of illustrated brochures. The brochures were being published by the Defense Logistics Services Center. Four volumes were to be published in June. Agencies were to screen the brochures, inspect the property as necessary, and establish their requirements by the automatic release date of 31 July 1965. The task force would assure accuracy and completeness of information contained in the brochures. Quality control would

be applied to the preparation and processing of the data sheets and the final printing of the brochures.[69]

From about mid-May the AMA's, major air commands, Army, Navy, and other defense and non-defense agencies screened their requirements against the brochures. The brochures could be compared, roughly to large mail-order-house catalogs, but without the expensive, picture-book niceties. They were developed and prepared for publication under the most rigid standards of quality control to insure their exactness and clarity. There were 12 volumes in all, covering available RPIE, AGE (mobile and fixed), and Communications-Electronics-Meteorological (CEM). SAC was responsible for preparing the data sheets describing and illustrating the RPIE; SBAMA DTAF for preparing data sheets on CEM and AGE; DLSC, for preparing the brochures for publication and for publishing them; and DTAF, for quality control. DTAF was also responsible for supplying technical assistance to SAC and DLSC, as required.[70]

Prior to publication of the brochures, procedures had been developed for accomplishing the screening process. AFLC's Air Materiel Areas were to screen the brochure against Air Force programmed operational requirements about which they had knowledge. The major air commands were to screen them against Air Force requirements not ordinarily known by the AMA's. Further, they were to screen them against potential requirements, that is, anticipated requirements to satisfy programs awaiting approval or currently in a study phase. General

Mundell requested that AFSC make known all of its requirements for excess materiel from Atlas E, F, and Titan I sites by 31 July. AFSC's requirements were to be submitted in two categories, as follows: First, requirements for approved programs; second, requirements for programs awaiting approval or currently in a study phase, or other potential programs. Requirements for both of the above categories were to be accumulated by the Norton office through 31 July.[71] General Mundell informed the major air commands and the Chief, National Guard Bureau that available assets at launch complexes where Atlas E, F, and Titan I missiles were being phased out would be pictorially displayed in brochures which were soon to be published and distributed. Brochures were to be published as follows: Volume I, for aerospace ground equipment; Volume II, for communications-electronics-meteorological equipment; and Volume III, for real property installed equipment. Distribution was to begin in May and be completed in early June to all addressees normally receiving DOD Excess Personal Property Listings and to places previously requested by all major commands. General Mundell advised that the Norton office, DTAF, would accumulate all brochure requests until 31 July. Assets for approved programs would then be allocated to satisfy known requirements in the order of precedence specified in the USAF Plan of Action for Phase-Out and Disposition of subject weapon systems. These were as follows: (1) USAF operational force requirements, (2) Excess to USAF

operational requirements, but required by other USAF agencies, (3) Excess to USAF requirements, but required by other DOD agencies, (4) Excess to USAF and DOD requirements, but required by other government agencies, and (5) Others--schools, cities, and other donees. The AFLC AMA's were to screen brochures for USAF programmed operational requirements for which they had knowledge. Major commands were to screen for requirements not normally known to AFLC--for both potential and firm requirements. Major commands were to forward potential requirements to Headquarters USAF for approval and immediate, firm requirements to SBAMA. Potential requirements approved by USAF were to be returned to the submitting major command and thence to SBAMA for allocation and scheduling subsequent to 31 July 1965. In making allocations, requirements for complete systems would be given preference, insofar as possible, over requirements for separated components. However, firm requirements for components would normally take precedence over potential requirements for complete systems. This was in consonance with DOD objectives to achieve the greatest utilization of excess personal property.[72]

Screening was substantially complete by 2 August 1965. As of that date figures showed that the Air Force had earmarked 42 per cent of surplus items from Atlas sites and 5.8 per cent from Titan I sites for reutilization. Those figures, however, do not tell the whole story. Additionally, approximately 15,000 line items were

being transferred to Base Supply and the AFSC Test Wing account at Vandenberg AFB in the Atlas booster program. Further, many Titan I site items were being retained for use in the Titan II program and were being transferred to the Titan II account.[73] Personal emphasis by the AFLC DTAF Commander, General Mundell, to all screening agencies, especially Air Force agencies, resulted in a much greater effort than ever before to reutilize excess equipment. Also, much credit for the successful reutilization of equipment can be attributed to: the extensive screening process and through the use of the DLSC "Excess Equipment Brochures" and the Lincoln AFB display prototype. To assure a thorough screening, DOD, in July 1965, directed all agencies to take another look at the excesses which caused the screening period to be extended to 15 October 1965. This DOD re-emphasis on screening and the extended screening period provided a more intensive, detailed second screening by DOD agencies and greater assurance that all requirements had been considered. Reutilization of equipment by USAF, DSA, National Aeronautics and Space Administration (NASA), United States Navy (USN), United States Army, GSA, etc. has reached 70 per cent of original cost of the missile equipment and spares controlled by the DTAF. This high reutilization factor has exceeded all expectations. Reutilization of RPIE and CEM has been higher due to the easier application of these items to other programs, and since most of these are standard commercial items. AGE, however, is peculiar to a particular missile and more difficult to adopt in follow-on programs.[74]

Diesel Generators and Air Conditioners

Surplus diesel power generators of 158 kilowatt-hour capacity and over, together with air conditioners of 100 ton capacity and more, were placed under special distribution control by Headquarters USAF. These items were urgently required for other worldwide USAF and DOD requirements. The Directorate of Civil Engineering, USAF, retained responsibility for their redistribution to DOD activities for construction programs.[75,76]

There were immediate requirements for some of the large-scale generators to fulfill oversea commitments; hence, redistribution of those items had to be considered first. Requirements for large air conditioners were not so immediate, so their redistribution could wait until dismantling of sites was accomplished, after 31 July 1965.

Since some of the excess generators at Atlas E, F, and Titan I sites were immediately required, Headquarters USAF gave first attention to the generators. On 15 January 1965 the Directorate of Civil Engineering, USAF, announced that power generating units of 100 kilowatt and larger were to be tested, disassembled, inspected, and reassembled awaiting redistribution to DOD activities. For convenience in discussion, all activities performed prior to final disassembly before redistribution are referred to below under the terms "tested" and "testing."

Division of labor for accomplishing the testing, teardown,

shipment, storage, and redistribution tasks was as follows: Headquarters USAF was to direct, monitor, and control the program, specify what generators were to be shipped and where, and issue shipping instructions. AFLC was to manage the testing, removal, temporary storage, and shipment of the generators. SAC was to furnish military personnel, as required, to assist the local task force commanders in their testing tasks. Contractor personnel were also to be used, as required.[77]

First plans called for testing 236 generators; but, in July 1965, the five White diesel units at Vandenberg Atlas F sites were waived from the testing requirement. Those generators had been operated only as standby units; hence, they had been used very little. Besides, they would probably remain at Vandenberg.[78]

Actually, then, there were only 231. Twenty-five were tested at Atlas E sites; 1 at Forbes, 6 at Warren, and 18 at Fairchild. One-hundred and thirty-four were tested at Atlas F sites: 22 at Lincoln, 24 at Dyess, 22 at Altus, 18 at Walker, 24 at Schilling, and 24 at Plattsburgh. Seventy-two were tested at Titan I sites: 12 at Larson, 12 at Ellsworth, 24 at Lowry, 12 at Beale, and 12 at Mountain Home.[79] The first generator was tested on 26 April 1965.[80] By 2 August all testing had been completed.[81]

Removal of generators from sites began at Complex A at Larson in June 1965. By 2 August, 36 generators had been removed: 4 from Larson, 12 from Warren, 18 from Dyess, and 2

from Lincoln.[82] As of 31 May 1966, all but 38 generators had been removed. Estimated removal of last generator is 2 September 1966.[83]

Prior to completion of testing, Headquarters USAF had accomplished a number of program reviews to determine Air Force requirements for large generators. On 6 May 1965, USAF advised DTAF that it had committed 178 generators on the basis of programs reviewed. Headquarters USAF listed 63 1000 kilowatt generators and 115 500 kilowatt generators by destination. Twenty--ten each--of the 1000 kilowatt generators were slated for Clark AFB, Philippines, and Thule AFB, Greenland. Twelve 500 kilowatt units would go to Southeast Asia, (SEA) 18 to the Military Assistance Program, 25 to the Automatic Digital Computer Network (AUTODIN) system, and 12 to the Survival Low Frequency (487-L) System. Sixteen other destinations were listed to receive 1000 kilowatt units. Destinations of the remaining 53 generators would be determined after all program reviews were completed. Distribution would be accomplished over a period of approximately two years.*[84] Significant accomplishments in the diesel generator removal program were:

a. Development of the test procedures and the verification of these procedures via prototypes at Lincoln AFB for Atlas F, Forbes AFB for Atlas E, and Larson AFB for Titan I.

b. Testing of all the diesel generators in the various

complexes and the accomplishment of this enormous task on schedule with the help of the using command's military personnel.

c. Development of removal procedures and the prototyping of removal techniques at Altus AFB - Dyess AFB for Atlas F, Warren AFB for Atlas E, and Larson AFB for Titan I. The Atlas E and F prototypes were contractually covered by the United States Navy contracts administered by the United States Bureau of Docks (BUDOCKS). This unique arrangement with the United States Navy required a Memo of Agreement between the USAF, United States Navy, SAC and AFLC. The Titan I prototype was covered by a service contract administered by SAC at Larson AFB. Realizing that an urgent requirement existed for all diesel generators and the complexities of removing them from a Titan site, SBAMA DTAF engineers quickly developed a method by which Titan I diesels were removed through the top of the underground equipment terminal. This required the excavation of approximately 20 feet of earth to get to the power terminal, cutting a hole through 18 inches of steel and concrete with a special cutting torch and removing the diesels by lifting them through the resulting hole. All four diesels at Larson AFB prototype were removed by this method which was considered satisfactory. Due to the planned overhaul for some of these diesels requiring complete dismantling, a new approach to removal was adopted. A method was developed whereby the diesels were dismantled into five

major components and brought to the surface through the elevator shaft by use of a special crane. The latter method proved to be easier and was adopted for removal of the remaining Titan diesels. It must be said here that these management decisions and technical developments on diesel generator testing and removal were unprecedented.

d. The utilization of these diesel generators to fill urgent world wide requirements including SEA represents a major milestone in the Missile Deactivation Program.

Accounting System

Recognizing that the General Accounting Office (GAO) and others will have intense after-the-fact interest in how well AFLC accomplished disposition of excess materiel, the DTAF has used extreme diligence in documenting all decisions and also has developed what is termed a "Closed Loop Audit Trail." The accountability for the equipment is maintained at each base. The base receives disposition instructions from SBAMA DTAF. The SBAMA DTAF has established a record for every item reported excess by the bases. They maintain these records and document every request they receive for equipment. For each item redistributed, the SBAMA DTAF sends shipping instructions to the applicable base. The base forwards copies of shipping documents to the DTAF as items are shipped, thus accounting for all items redistributed. Those items that are not redistributed and become property of the

service/salvage contractor, the accountable officer will transfer to Redistribution and Marketing (R&M). A copy of Air Force (AF) Form 695-7 will be forwarded to the DTAF. Equipment remaining in the sites for turnover to other Air Force activities or GSA is transferred to the civil engineer on Defense Department (DD) Form 1149 and to the Air Force or GSA through the Army Corps of Engineers on Standard Form (SF) 118C. Copies of these transfer documents are provided to the DTAF. This section closes the loop and clearly shows all disposition actions performed from receipt of the excess inventory to final disposal.[85]

Air Conditioners

There were relatively few air conditioners of 100 ton capacity and larger; and those that were used were located only at Titan I sites. All air conditioners of 100 ton or larger had been distributed by SBAMA DTAF in accordance with Headquarters USAF directive of Directorate of Civil Engineering, USAF, (AFOCE-KC).[86] The 100 ton or larger air conditioners had been distributed to a number of Air Force bases.[87] All other air conditioners in the Titan I, Atlas E and F weapon systems were redistributed by means of the excess equipment brochures. The brochures had been distributed to Air Force, Army, Navy, Atomic Energy Commission (AEC), to all agencies authorized to request excess equipment and to various donees.[88]

Disposition of RPIE and Real Property

As early as 16 September 1964, the problem of disposing missile facilities and equipment and command responsibilities was under consideration. SAC recommended that AFLC be responsible for disposition of Real Property and equipment.[89]

On 26 October 1964, AFLC disapproved SAC's recommendation that AFLC should be made responsible for disposing of phased-out missile facilities and equipment.[90]

On 17 November 1964, SAC message DPL-08520 reiterated SAC's desire to shift responsibility for disposing of phased-out missile facilities and equipment to AFLC.

Following the 19 November 1964 DOD announcement, USAF assigned the responsibility for disposing of real property, installed equipment to AFLC.[91] The Norton DTAF was an integral part of Headquarters AFLC ICBM Deactivation Task Force, therefore the management of disposing of real property installed equipment was SBAMA DTAF's responsibility.

Site Dismantlement

For purpose of this deactivation program there are two categories of sites - "retained" and "disposal." "Retained" sites are those sites that are retained by the Department of Defense for other use and those sites that are to be turned over to GSA for donation. "Disposal" sites are those sites that

are no longer required by the Air Force and will be disposed of by GSA. "Retained" sites will be partially stripped of obligated (save list) materiel through service (removal) contracts. "Disposal" sites will be stripped of obligated (save list) materiel by service/salvage contract. The service/salvage contract, a contractual instrument untried previously by the Air Force and certainly unprecedented, proved to be the most effective instrument for phasing out the "disposal" sites. This service/salvage concept provided for a contractor to remove obligated items with the remaining materiel in the site belonging to the contractor for salvage. Putting the idea into practice was not an easy task. The Air Force Logistics Command with Strategic Air Command coordination made a careful study to determine the best method and the best agency for dismantling and removing equipment and for disposal of residue. It was concluded that a combination service/ salvage contract under the administration of DSA would be in the best interest of the Government. Also, DSA had agreed to allow DLSC to accept responsibility for such contracting. After presenting this method and obtaining Headquarters USAF approval, AFLC negotiated with DSA and GSA to work out the plans and details for contractual arrangements, work statements, Invitation for Bids, etc. The major sequence of events is set forth in the following paragraphs.[92]

In March 1965 the AFLC ICBM Deactivation Task Force developed a proposal for dismantling Atlas E, F and Titan I sites for

disposition of the equipment. DTAF proposed that the dismantlement and disposal tasks should be accomplished contractually, under the auspices of DLSC. DLSC had agreed to accept responsibility for the contracting.

DTAF also recommended that a service and salvage type of contractual arrangement be used as the primary method for dismantling the equipment. Under this arrangement the contractor would remove all equipment which had been earmarked for meeting Air Force, Army, Navy, and other Government requirements and authorized donees and would move it to a location designated by the Air Force. Equipment not required by the Government would become the property of the contractor. The real property would be turned over to GSA after all equipment was removed.

DLSC could use other types of contracting if it would be to the best interests of the Government to do so. For one, it could use a service contract wherein the contractor would remove the required equipment for a fee. GSA would get the equipment remaining at the site and would sell it along with the real estate. And a straight real estate sale was also a possibility, with the buyer purchasing all of the equipment and the real estate.

The DTAF urged Headquarters USAF to approve contract dismantlement (1) because AFLC's primary responsibility was to use its limited organic resources to support firstline weapons and (2) because it was inappropriate to use SAC's skilled airmen to perform major dismantling and removal actions. On 31 March,

USAF verbally approved DTAF's proposal. Written approval followed on 15 April.[93,94]

On 11 May 1965, DTAF requested USAF to remove Atlas F Sites 3 and 9 at Plattsburgh, New York, from the indefinite retention status and to authorize their dismantlement. This would permit prototype testing of the service and salvage contract concept. These sites were selected for this purpose for three reasons: First, water leakage at the sites made their further use questionable. Second, connection of commercial electric power to those sites, a prerequisite for continued retention, would be unreasonably expensive. And third, no interest had been expressed by any agency for utilizing either site.[95] On 14 May, Headquarters USAF approved the request.[96]

By 31 July 1965, the invitation for bid had been mailed out. Bid opening was scheduled for 31 August. Through the joint efforts of the AFLC/SBAMA Task Force and DSA, invitations for bids for all remaining deactivated missile sites were developed and offered to prospective contractors for service/salvage contracts. The bulk of these contracts had been let and were in work. The completion dates were rapidly being finalized and the overall program was on schedule.[98]

Safety*

SBAMA/DTAF reviewed the subject of safety responsibility during the initial planning for the deactivation effort. Air Force personnel were to accomplish all work in accordance with standard Air Force safety practices. The work of those contractors working on Air Force contracts for the Air Force on retained sites, safety was to be covered by provisions of the Air Force Procurement Instructions, (AFPI). Safety responsibilities for the service/salvage contractors were to be the complete responsibility of the service/salvage contractor. AFLC, as the executive manager for the deactivation program, retained overall safety surveillance responsibility for the Air Force during the DTAF's initial planning for the removal of the service/salvage contracts, the planners determined that, if the contractor performed in accordance with standard industrial practices and in accordance with the safety codes of the various states involved, the Air Force would be assured that the contractor would operate in a safe manner. The service/salvage contractor was also responsible to provide the various types of liability insurances; bodily injury insurance, property damage insurance, Standard Workmen's Compensation and Liability Insurance, as well as performance bond. It was, therefore, determined that if these requirements were included in the

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* Information provided by Martin Gordon, Chief, SBAMA (SBGMAT)

terms and conditions of the service/salvage contract, this manner of operation would provide adequate protection for the Air Force and that if standard Air Force safety practices were imposed on these service/salvage contractors who were not familiar with this method of operation, it would eliminate a large number of potential bidders. It was, therefore, concluded that operating in accordance with standard industrial safety practices was in the best interest of the Government.

On 3 December 1965, Headquarters USAF, in their message AFSDC-76058, determined that although the phase-down programming was not specifically included in the original message on ICBM System Management during major maintenance/modification programs, the requirements outlined for this program would be implemented for the deactivation effort and directed that the following basic requirements would be followed:

a. Overall responsibility assigned to a single command.

b. Plan of work developed including a safety analysis to identify special hazards and provide adequate safeguards to insure maximum protection to personnel and equipment.

c. Provisions for a task force operation with total safety and management responsibilities assigned locally to a single manager.

d. Provisions for a Director of Emergency Operations.

AFSDC-76058 also stated that once the DSA disposal contractor

assumed responsibility for the site, safety responsibility became the contractor's responsibility in accordance with DLSC contracts and the USAF Plan of Action of the Phasedown of the Atlas E, F, and Titan I. In addition, on completion of the service/salvage contracts, the Air Force again assumes responsibility for the facility.

Based on this direction, the DTAF reviewed actions that had been taken to date, and it was found that primarily all the intent of the requirements had been complied with, with the exception of the provisions for the Director of Emergency operations. Each Command, SAC, TAC, and ATC was then required to comply with the requirements and has done so. SBAMA Message SBGM-14609 dated 3 February 1966, advised Headquarters AFLC of the actions the DTAF had taken to date. The headquarters concurred in message MCM-20318 dated 16 February 1966, that SBAMA/DTAF had complied with the requirements of the Headquarters USAF message.

In addition to the above, during the first portion, i.e.; the removal of the save list items by the service/salvage contractors, DLSC had appointed a Contracting Officers Representative (COR) to assist them in exercising contract management. Each base also furnished a qualified safety technician for the Site Deactivation Task Force (SDTAF).

The Contracting Officers Representative (COR) was a member of the SDTAF and was assigned to AFLC. The Contracting Officers Representative did observe that fire and safety requirements of the contracts were being performed during the removal of Government Save List Items, taking conclusive actions with the contractor as required. If the contractor refused to comply with such contractual requirements and urgency did not permit coordination with the Sales Contracting Officer, the Contracting Officers Representative interrupted the contractor's performance where the infraction occurred. After all Save Items had been removed, the major air commands agreed to accept the Contracting Officers Representative for the salvage phase of the contract. This requirement is included in the supplement to the Memorandum of Agreement, dated 15 March 1966.

SPARES*

The directives to phase-out the Atlas and Titan I missile systems, presented AFLC/SBAMA with a series of unique problems in disposing of the spares aggregated and managed by the System Support Managers (SSM's).

The SSM's utilized the Automatic Resupply Logistic System (ARLS) to provide logistic support to the missile squadrons and sites. The principal characteristics of the ARLS system were:

a. Central Accountability and knowledge of spares.

b. Automatic resupply to squadrons based upon predetermined levels.

c. Minimum administration required at the missile squadron.

d. Maximum use of computer records for accountability and distribution of spares.

With central accountability the SSM's were responsible for declaration of excesses and the issuance of shipping instruction for movement of material. The Atlas and Titan I spares involved in this program were located at seventeen bases and nineteen separate storage sites, with 243,909 gross stock locations. The computer programs for ARLS did not provide for mechanical preparation of shipping documents required for movement of material outside the system i.e., DD Forms 1348-1 or AF Form 695-7. Further, machine programs provided for declaration of excesses only in terms

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* See list of Supporting Documents covering the Spares at the end of this chapter.

of the Weapon System Storage Site (WSSS) and not by squadron location.

To eliminate the automatic resupply feature of the ARLS system, required that squadron levels be set to zero. The machine programs for the levels sub-system of ARLS did not provide a mechanical means for zeroing levels at specific squadrons.

The limited manning at the missile squadrons required that documentation be prepared at SBAMA for all movement of material. In fact, to accomplish mass movements of material it was necessary to provide assistance to the squadrons from SBAMA to accomplish the movement with reasonable time schedules.

Due to the reliance by the SSM upon computer records as well as the volume of manual action which would be required to execute the excess program, SBAMA was required to develop special computer programs and computer systems to meet the requirements of this program. This effort consumed a large portion of the analyst-programmer capability available to Data Services Division as well as requiring additional programmer assistance for OOAMA.

The logistic support system (ARLS) for Titan missiles provided logistic support to both Titan I and Titan II. With the phase-out of Titan I and the transfer of Titan II to OOAMA, a segregation of files and tapes was necessary. Separate accounts were established for Titan I and Titan II and redistribution of common Titan material was made to the Titan II account.

Based upon the experience gained during the screening by Inventory Managers (IM's) and Defense Supply Centers (DSC's) of the excesses at Offutt AFB (Atlas D) and the disposition of these assets, Hq SAC requested AFLC to develop methods of handling the excess other than those provided in AFM 67-1. After redistribution of excess assets required by IM's and DSC's, 83% of the line items were turned in to Redistribution and Marketing activity (R&M) at Offutt AFB. Hq SAC contention was that through screening of all SSM's assets on a nation-wide basis, better reutilization could be gained. Further that SAC was not in the position of handling the volume of material and reporting which would generate as a result of current methods for handling of excesses. The results of SAC request was to develop the series of actions outlined in paragraph 9 of "AFLC Supply/Disposal Implementing Plan for Phase-out of Atlas E, Atlas F, Titan I Weapon Systems" for disposition of spares excesses.

During the initial planning phase, it was planned that the SSM would aggregate stocks and support the Booster programs for Atlas and Titan through use of a storage site. Under this concept levels were established at Vandenberg and Norton WSSS to support the entire Booster Program and material was earmarked for redistribution to the two locations. In accordance with MCG letter dated 8 April 1965, Subject: Storage Point for Atlas & Titan I Spare Parts, the policy for support of the Booster programs

was changed. For Atlas Booster program, the "IM to user concept" was to be implemented and for Titan I Booster program, an Air Force Supply Directive (AFSD) concept was to be used. This change required additional screening by the IM's of the assets which had been set aside for the Booster program and the preparation of additional shipping instructions.

Discontinuance of Automatic Resupply

With orders to remove Atlas and Titan I missiles from an operational status, the requirement to continue automatic resupply to the effected missile bases was no longer needed. This matter was discussed at SAC/SBAMA conference on 19-20 November 1964. SBAMA's recommendation was: the EOQ* levels be deleted immediately, and that category II levels be deleted 45 days before stand-down and category I levels be deleted 40 days before stand-down. This recommendation was based upon the authorized stockage as prescribed in AFLCM 300-27. SAC representative agreed with the proposal and concurrence was received 28 Nov 1964 for Hq SAC (reference SAC msg DM3-111020 dated 28 Nov 1964). Using locally developed computer programs, the levels were deleted as follows:

a. EOQ* levels for all Atlas and Titan I Squadrons were deleted 28-29 Nov 1964.

b. Categories I and II levels for FE Warren AFB, Forbes AFB,

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* Economic Order Quantity.

Altus AFB, Dyess AFB, Walker AFB, Ellsworth AFB, Beale AFB, and Larson AFB were deleted 5-6 Dec 1964.

c. Categories I and II levels for Fairchild AFB, Schilling AFB, Lincoln AFB, Plattsburgh AFB, Lowry AFB, and Mt Home AFB were deleted 18-19 February 1965.

d. At Vandenberg levels were adjusted to only those levels that would be required to support the Booster program in accordance with AFLC Supply/Disposal Implementing Plan dated 4 January 1965. This action was accomplished on 19 January 1965. These levels remained in effect until 20 July 1965, at which time the Booster program was placed on the IM to user concept and the AFW spares transferred to Vandenberg Base Supply Account.

Declaration of Excesses

The initial experience in the disposition of assets at a squadron was gained in January through March 1965 with the disposal of assets at Offutt AFB. From this effort and experience, the pattern and the computer programs for handling of excesses at other sites were initially developed. The ground rules under which the assets at Offutt were processed were:

a. Assets would be used to fill shortages at Vandenberg and the WSSS for items designated for booster support.

b. Air Force centrally procured items (AF-CP) having quantities in excess of the booster requirement would be reported by SBAMA to the AF Inventory Manager (IM) regardless of dollar value.

c. DSA-managed items having quantities in excess of the booster requirements would be reported by SBAMA to the appropriate Defense Supply Centers (DSCs) in accordance with Section C, Chapter 2, Vol VI, AFM 67-1, which basically stated that only items having an aggregate value of $10.00 or more would be reported. DSA-managed items with an aggregate value of $9.99 or less were authorized for disposal and would be placed on DD Form 695-7 for transfer to R&M.

The results of the processing and screening Offutt assets were that approximately 5,000 shipping documents were processed in support of the booster program and 12,500 items were available for excess screening. Seventeen percent of the assets offered to the AF-IMs and DSCs were returned to their control; the remaining 83 percent were authorized for turn-in to Redistribution and Marketing activity (R&M) as AF surplus.

Under the local machine programs and procedures used in processing the excesses at Offutt AFB, documents were prepared to move the materiel for the Booster program, report cards prepared to report excess to the Inventory Control Points (ICPs) and specialized card formats were used to permit the preparation of DD Form 695-7 at Offutt AFB. Manual controls were established to control the receipt of replies from ICPs and the manual preparation of the necessary shipping documents or disposition documents. For Offutt's excessing, the volume of items under manual control was 8864 items.

It was recognized that the excessing of assets at Atlas E, Atlas F, and Titan I sites would involve a volume of items that could not be effectively handled manually. To provide a means of maintaining the needed records, preparation of documents and preparation of reports, a computer system was locally developed (SBNMDA memos dated 21 Jan 65 and 2 Mar 65 and DMMOI 67-3 dated 15 March 65). This system established a master record on each stock item at each location where excess was available. This record reflected quantity excess, quantity directed for shipment and quantity shipped, as well as required indicative data so that various documents that might be required, could be prepared. Through use of the master file, the needed status reports could be summarized. In addition, there was established a transaction register to reflect all actions taken during the excess program. Inputs to the system included ARLS master records, AFW Storage warehouse location cards, computed excess cards, ICP replies to declaration of excess and ARLS inventory transactions. Thus the operation of the system required limited manual input by the SSM.

Reporting to the AF-IM and DSC's had to be modified to permit the handling of special condition which arose as a result of central accountability. Specifically in the case of DSA items, the requirement that shipments of requested returns must be made within ten days was waived. (DSA Msg DSAH-OMS2124-64 dated 19 Dec 64).

This waiver permitted the preparation of documentation for shipments on a scheduled basis rather than on an as received basis. In the case of AF-CP items, special procedures were established using an AFLC proposed base supply excess procedure, which permitted reporting by card input broken down by squadron location. (AFLC Msg MCSY-11256 Jan 1965, MCSY-13455 Jan 1965, and MCSY-18283 Feb 1965).

Excess Reporting to the ICPs was handled in three increments:

Date	No. of Loc.	AF-CP* ITEMS	AF-CP* DOLLARS	DSA ITEMS	DSA DOLLARS
Jan 65	1	6,914	5,069,115	1,950	162,882
Mar 65	9	53,082	23,443,836	14,589	1,283,642
May 65	9	58,196	33,662,639	20,029	3,669,682

Specialized Procedures for Disposition of Excess

In mid-March Hq SAC stopped all movement of phasedown missile excesses to the base Redistribution and Marketing (R&M) activity without Hq SAC approval. This action meant that in the spares area DSA items having a value of less than $10.00, DSA items declared excess by the DSCs and AF-CP items declared excess by AF-IMs could not be moved from the AFW account by 695-7 action. To resolve this problem there were several meetings at AFLC, SAC, and SBAMA, and an acceptable and workable position was reached during a meeting at SBAMA 5-6 May 1965.

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*Air Force Centrally Procured

The specific changes to normal disposition action were:

a. SBAMA would aggregate AFW spares by account and report to DLSC all items that met the reporting criteria of AFM 67-4.

b. Missile bases would review and report to DLSC the RPIE excess spares that met the reporting criteria of AFM 67-4.

c. DLSC would prepare and distribute by 1 July 65 special excess screening listings for DOD, other Government agencies, and donation screening. Automatic Release Data (ARD) would be established as 1 October 1965. SBAMA and the missile bases would process all requisitions received from government agencies as long as material was available. Request from donees would be processed after all requests from government agencies had our processes.

d. SBAMA would prepare listing and a deck of cards by base for all items that did not meet the reporting criteria of AFM 67-4 or were rejected by DLSC. These listings would be forwarded to each base R&M activity, which would conduct a 30 day local area screening of these items. Bases would also develop listing of RPIE spares that were not reported to DLSC to be used in conjunction with the SBAMA prepared listing for the local area screening. The time established for this screening was 15 Aug 65 through 15 September 65. Material would not be turned over to the screeners until after the property was transferred to R&M; target date established as the 1st week in October.

e. SBAMA would prepare AF Form 695-7 multiple line turn-in documents reflecting asset position as of 1 Oct 65. These documents would be handcarried to each base for signature by R&M Officer. Materiel was not to be physically moved until sales could be arranged by DSSO's.

f. Based upon adjusted balances available for sale, SBAMA would prepare a DLSC sales report card for all items at each base. These cards would reflect item identification, quantity and item application. Schedule established for submission of these cards was 10-15 Oct 65. A listing of sales report cards furnished DLSC was to be furnished each R&M Officer so that adjustment could be made to the sales report if any additional reutilization of spare was made subsequent to the as of date of the report.

As a result of a meeting held 7 Jun 65 at SBAMA, a requirement for a wall-to-wall inventory was also established. This inventory would be accomplished during the period 1-15 August and records adjusted to new balance figures between the period 15-31 Aug. The inventory was conducted as a joint effort between SSM, Base Supply Officer and Base R&M Officer in order that AF Form 695-7 could be processed with a minimum of review and the DLSC sales reports cards would have a high degree of accuracy in quantities available for lot sale. This action required the re-establishment of master files for the local mechanized excess processing system, which was used to prepare final turn-in documents and ARLS transaction to close the ARLS accounts.

The actions outlined above were accomplished, the planned dates for preparation of AF Form 695-7 and the DLSC Sale Report were extended due to the need to allocate materiel to support AF retained missile sites. Final sales reports were forwarded to DLSC on 5 Nov 1965.

Though considerable time and effort were expended in development of the DLSC sale report data, including all application data for the spares, little or no use was made of the sale report information other than stock number and quantity. In the same vein, though spares were retained for support of end items that were requested by various activities, and these activities were told that spares were available, limited requests were received for spare packages to support an end item of equipment. The only area in which spares were aggregated to support end items of equipment, was for the Air Force retain sites where AFW spares were forwarded to the Base Supply Officer to hold pending notification of approval of special mission for these sites.

Titan I/Titan II File Segregation

The AFLC plan for phaseout of SBAMA, assigned the management of Titan II to OOAMA and the disposition of Titan I spares and equipment to the Deactivation Task Force. Since the spares for both Titan I and II were carried in ARLS under the same property record account, a segregation of property records and

files was required. Action was initiated by SBAMA on 16 Feb. 65 to secure from AFLC a new stock record account and necessary additional codes to permit the transfer of Titan II material from the current Titan stock record account. AFLC's actions were: to assign a new stock record account (AFW 2272) for Titan I instead of Titan II, to assign a new material management code of "CE" for all Titan I peculiar spares and equipment and to request that necessary machine programming to effect the breakout of Titan I from Titan II be accomplished locally.

Local management was not in agreement with action taken by AFLC and requested a reversal on the assignment of stock record accounts. It was management's contention that a cleaner set of records and files would be available for transfer to OOAMA for the Titan II, if a new stock record account was used. The volume of suspended transactions which would require research prior to the transfer would be lessened and some 30,000 declarations of excesses in distribution to the Inventory Control Points would not require conversion of Stock Record account numbers. Management's request for reversal of AFLC action was not approved, with the result that an increased amount of manpower and machine time were required to accomplish the breakout of records and files.

Local plans and machine programs were developed and the actual separation of files and records was accomplished during the period 28 May 65 through 9 Jun 65.

Spares for Booster Support

"The AFLC Supply/Disposal Implementing Plan for Phaseout of Atlas E, Atlas F, and Titan I Weapon Systems" dated 4 Jan 1965 provided specific guidelines for identifying, computing, and retaining of spares needed to support the Booster fire-out program. Based on that guideline, usage data by system was reviewed and levels established for Vandenberg AFB and Norton Weapon System Storage Site. This action was completed prior to the first declaration of excesses approximately 1 March 1965. The policy as outlined in the above referenced plan was not favorably accepted by the Command Section of SBAMA, the Directorate of Supply at AFLC, and the Directorate of Materiel Management of SMAMA. Basic reasons for objection to the procedures were:

a. ARLS with a storage site concept was to be continued.

b. ARLS with a single site to support would not be an economical operation.

c. Materiel would be returned to the Norton Weapon System Storage Site or be retained at Norton, when all the planning by Command was towards vacating the Norton warehouses of materiel.

d. SMAMA was not desirous of implementing an additional logistic support system due to lack of computer time and trained personnel.

As a result of these activities' objections to proposed method of support, a revised policy was issued by AFLC in April (MCG

letter, "Storage Point for Atlas & Titan I Spare Parts" dated 8 April 1965). The support for the Booster Program would be by Inventory Manager to User concept, with system support management limited to technical and control phases. And with this concept Vandenberg AFB would maintain stocks of spares within their Base Supply account and would requisition to fill shortages and to secure non-programmed requirements.

The change in policy necessitated a review by the Inventory Managers at all AMAs of the levels established by the SSM and the assets available within ARLS. Listings were prepared for this purpose and forwarded to each Inventory Manager. As a result of this review 8,359 shipping instructions were prepared to move material to the Inventory Managers' Storage distribution point and 9,876 shipping instructions were prepared to move material from the Air Force Weapon Account to the Base Supply Account at Vandenberg. ARLS support for the Booster Program was discontinued effective 1 July 1965.*

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* The above narrative on "Spares" was prepared by Mr. David Waterbury as recommended by the staff of the Deactivation Task Force at SBAMA. Narrative is documented on the following pages as "List of Supporting Documents."

List of Supporting Documents covering Spares Story

(paragraph numbers correspond to Spares narrative)

Paragraph 1

MSG-SBNM-39220 dtd Dec 1964 to SAC, Subj: "Discontinuance of Automatic Resupply".

MSG-DM3-111020 SAC dtd 28 Nov 64 to SBAMA.

Memo from SBNM to SBCS dtd 23 Nov 64, Subj: Missile Phase-Down.

Memo from SBNMDA to SBCSAR, SBGSM, 13 Aug 64, Subj: "Levels Change for "D" Phase-Down".

Memo from SBNMDA to SBGSAR & SBGSM, 24 Sep 64, Subj: "Levels Change for "D" Phase-Down".

DMMOI 67-3 dtd 15 Mar 65 SUPPLY - Reporting & Disposing of SSM, AFCP & DSA Excess, 10 pgs.

Memo from SBNMDA to SBCSMN dtd 3 Mar 65, Subj: Weekly Reports of Phase-Down Actions w/atch.

Paragraph 2

Memo from SBNMDA to SBCSAR, SBCSMN in turn, Subj: Missile Phase-Out dtd 21 Jan 65 w/4 atch.

MSG from AFLC, MCSY-11256, 11 Jan 65, Subj: Disposition of ARLS Managed Air Force CP Item Excesses.

MSG from DSA, DSAH-OMS-sls4-64 for SBAMA/SBNCR, dtd 21 Dec 64.

Priority MSG from AFLC MCSY-11256.

MSG from AFLC MCSY-18283, dtd 11 Feb 65, Subj: Disposition of ARLS Managed AF CP Item Excesses.

Paragraph 3

Ltr from SAC to Gen. Mundell, AFLC dtd 2 Apr 65 w/atch.

MSG from AFLC, MCSJ-32816, dtd 12 Apr 65.

AFLC Presentation at SBAMA 5-6 May 65, "Processing of Spares & Mobile AGE".

MSG DM46081 dtd 15 May 65 from Lt. Col. Kelly to SBAMA.

Ltr from AFLC to the AMA's, Subj: Special Instruction for Processing Missile Phase-Out Property to and by Redistribution & Marketing Activities w/2 atch.

Ltr from AFLC to SBAMA dtd 3 Aug 65, Subj: Format for reporting Surplus Missile Spares to DLSC for sale w/1 atch, "Sales Report Card & Format Inst."

Paragraph 4

Memo from SBN to SBNB, NC,ND,NE,NM,NN,MP,NR,NS, dtd 10 Feb 65, Subj: Realignment of SSM Functions with 1 atch/Plan of Action.

Memo from SBV to SBA, SBB, SBC, SBN, dtd 8 Feb 65, Subj: Implementation of Plan of Action, w/1 atch/Plan of Action

Ltr from SBN to AFLC, dtd 18 Feb 65, Subj: Assignment of Stock Record Account #LGM-25C Titan II SSM.

MSG from SBAMA to AFLC dtd 9 Mar 65, Subj: Transfer of Titan II, SSM & IM to OOAMA.

MSG from AFLC MCGPS-26032 dtd 18 Mar 65.

MSG from AFLC MCGPSA-28265 dtd 26 Mar 65, Subj: Separation of Titan I and II ARLS (AFW-2282) Records.

Priority MSG from SBAMA-SBN-12042 dtd 25 Mar 65, Subj: Titan II Weapon System Account Code.

MSG from AFLC, MCGP-30359, dtd 6 Apr 65, Subj: Titan II Weapon System Account Codes.

MSG from AFLC, MCSY-26311 to SBNM, dtd 19 Mar 65, Subj: Transfer of Titan II SSM to OOAMA.

MSG from AFLC, MCGPS-36774 to SBAMA, dtd 1 May 65, Subj: Establishment of SOP for Account FD 2878 at OOAMA.

MSG from SBAMA to AFLC, SBV-85292, dtd 8 Apr 65, Subj: SOP for Titan II Materiel.

MSG from AFLC, MCGPS-25944, dtd 17 Mar 65, Subj: AMA Phase-Out Plan.

MSG from AFLC, MCSYS-36946 dtd 3 May 65, Subj: New ARLS Location Code for Titan I at VAFB.

MSG from AFLC, MCSYS-38866 dtd 12 May 65 to SBNMD.

MSG from AFLC, MCSY-26770 dtd Mar 65, Subj: Assignment of Stock Record Account Number LGM-25C Titan II SSM.

MSG from SBAMA to AFLC, SBN-12048, dtd 2 Apr 65.

Memo from SBNMDA to SBCSM dtd 11 May 65, Subj: ARLS Processing Following Titan File Split.

Memo from SBCSM to CSS, CSMA, CSMP, CSMN, Dtd 13 May 65, Subj: Titan 1/II ARLS File Split.

Ltr from SBND to OOAMA, dtd 13 Jul 65, Subj: AFLC Programming Plan 65-4, Phase I.

D/MM Plan for Separation & Processing of Titan II Items & Records-14 pgs.

Paragraph 5

AFLC Supply/Disposal Implementing Plan for Phase-Out of the Atlas E (COM-16E) Atlas F (HGM-16F) and Titan I (HGM-25A) Wpn Sys w/atch.

Ltr from AFLC to SBG, dtd 8 Apr 65, Subj: Storage Point for Atlas & Titan I Spare Parts, w/atch: Instructions.

MSG SBGMA-51081, 19 Apr 65 to AFLC, Subj: AFLC Supply/Disposal Implementing Plan for Phase-Out of Atlas E, F & Titan I.

Memo from SBCSM to SBNMDA and SBNCRD dtd 28 Jun 1965, Subj: DSA Booster Item Excessing.

Memo from SBNMDA to SBCSAR & SBCSM dtd 28 Jun 1965, Subj: P437 - Transfer of Prime Items from VAFB w/3 atch.

MEMO FOR THE RECORD: 7 Jan 65, Subj: Atlas & Titan Phase-Down.

Memo SBNMDA to SBCSAR, SBCSMN dtd 4 Jun 65, Subj: Service in Support of Booster Program, w/atch.

MSG from CSAF, AFSSSCB-86063, Feb 1965 to MCSC & MCGM, Subj: Spare Parts Retention to Support Launch Requirements for Non-Operational ICBMS.

H-SBAMA Special Study-12, Half Title Page

PROTOTYPING

Preservation Procedures

Lincoln Site 12 Display

Diesel Generator Testing and Removal

Plattsburgh Site 3 and 9 Service/Salvage Contract

Chapter V

Prototyping

Throughout this program, management was faced with a number of decisions because previous experience was extremely limited or nonexistent. Where appropriate, engineered studies were performed by San Bernardino Air Materiel Area Deactivation Task Force (SBAMA DTAF) to aid management in making technical decisions. Typical examples of these studies were: (a) Modifying commercial flatbeds to accommodate Titan I missiles; (b) Preservation Procedures; (c) Diesel Generator Testing; (d) Diesel Generator Removal; and (e) Dismantling and removal of Equipment from Launch Facilities. Studies were also required in many other areas no less significant. In the more complex areas and when possible, the studies were prototyped to verify information such as proposed removal procedures, testing procedures, etc. Major prototypes are discussed as follows:[1]

Site/Complex Preservation Procedures

Air Force Logistics Command (AFLC) DTAF jointly with SBAMA DTAF selected a Titan I complex at Beale Air Force Base (AFB), and two Atlas F sites at Altus AFB, for prototyping the preservation effort. SBAMA DTAF, Strategic Air Command (SAC), jointly with personnel from Mobile Air Materiel Area (MOAMA), Ground Electronics-Engineering

Installation Agency (GEEIA), and various contractors placed these sites/complexes in a preservation status.

Results of the prototype effort proved that the cost to preserve a Titan I complex would amount to approximately $17,000; to preserve an Atlas site would cost about $6,000. Cost per month for commercial electricity would be substantially lower then for government-owned diesel generated power. Prototyping also indicated that caretaker personnel requirements for preservation would be about 12 men for a Titan I complex and about 14 for an Atlas F site. Estimates showed that a professional group of about 25 men could place a complex/site in preservation in approximately five days.[2]

Lincoln Site 12 Display

Site dismantlement efforts are covered under two headings: (1) Lincoln AFB Prototype Dismantlement for Equipment Display and Data Development and (2) Dismantlement Plans and Contractual Instruments. As the title of the first topic implies, one purpose of the dismantlement effort at Lincoln was to provide prospective customers with an opportunity to look equipment over to determine what they could use. This was touched upon in the section above on "Screening." As indicated by the latter part of the title, however, this was not the sole purpose. A lot of information could be obtained as to how many man and machine hours were involved in dismantling given items of equipment, as to the order

in which items should be removed, as to costs, and so forth. Such information is the basis of industrial engineering, and it would be highly useful when general dismantling began after 31 July 1965.

The second topic is concerned with whether the work should be done organically or contracted out; and if contracted out, what instrument or instruments should be used. It is also concerned with testing out the principal type of contractual instrument selected to see if it was actually the best type to use.

Early in March 1965, SAC and AFLC jointly decided to dismantle equipment at a missile site near Lincoln, Nebraska, and display it at Lincoln AFB. One purpose of removing and displaying the equipment was to provide potential users with first-hand knowledge of available Aerospace Ground Equipment (AGE) and Real Property Installed Equipment (RPIE) at a typical Atlas F site and to acquaint them with the removal charges they would incur for equipment they might select. Another was to provide government agencies with information about the sequence in which items were removed, types of skills required to dismantle a site, manpower that would be needed, and costs.[4, 5, 6, 7, 8]

During the month, the two commands worked out arrangements for the dismantlement. AFLC agreed to provide technical direction and guidance for the project and to furnish technical assistance. Further, AFLC agreed to work out sequence charts on the dismantlement, develop manpower requirements data, and calculate removal

costs. SAC agreed to provide military manpower and funds required for the dismantlement, to transport the equipment to the enclosed display area at the base, and to display it.[9] SAC agreed to provide a full-time force of 75 to 100 people on a two-shift-day, five-day-week basis, for a period of approximately two months--the time required to complete the job.[10]

Dismantling began on 5 April and by 1 June the equipment had been removed and the display was ready. On 13 June the DTAF office at Norton informed the major air commands that their personnel could inspect the equipment with a view to acquiring wanted items.[11,12] Other Department of Defense (DOD) and non-defense agencies and individuals were informed of the display by various means.

Two-hundred seventeen visitors had viewed the display by 30 July 1965. Of that number, 43 represented Air Force activities; 40 represented other DOD agencies; 18 represented other federal agencies and state governments; and 116 were non-government people representing their own interests, the interests of private companies, or those of institutions.[13]

Diesel Generator Testing

SBAMA DTAF, SAC and Diesel Generator Contractors jointly tested the generators in place at the sites/complexes prior to removal. SBAMA DTAF developed the testing procedures. These procedures for testing the diesel generators were prototyped at Lincoln AFB for

Atlas F, Forbes AFB for Atlas E, and Larson AFB for Titan I. Generators were tested using various loads to determine their condition prior to removal and shipment.[14]

Diesel Generator Removal

SBAMA DTAF personnel developed the procedures for diesel generator removal. These procedures were prototyped at Altus AFB and Dyess AFB for the Atlas F, Warren AFB for the Atlas E, and Larson AFB for Titan I. Atlas E and F prototypes were covered by United States Navy contracts and the Titan I prototype was covered by a service contract administered by SAC.[15]

Plattsburgh AFB Sites 3 and 9 Service/Salvage Operations

To determine the feasibility of utilizing service/salvage contracts, the DTAF selected two sites at Plattsburgh AFB, sites 3 and 9, to be sold under the service/salvage concept early in the program. The bids for contracts were opened on 31 August 1965. The results of this prototype effort proved the feasibility of service/salvage contracts. A great deal was learned in the contract administration area and in the preparation of Invitation for Bids (IFB). Also, much was learned in the proper identification (marking) of equipment to be removed from the sites (Government Save List Items). Other benefits will be derived from this prototype effort as the program progresses.[16]

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EVALUATION OF THE ICBM SDTAF PROGRAM

Maximum Reutilization of Assets

Compressed Screening Schedules Through Concurrent Actions by AF, DOD, Other Government Agencies

Accomplishment of Deactivation with Minimum Expenditure of Funds and Manpower

Use of Missile Spares or Excesses to Preclude New Buys in Other Programs

Chapter VI

EVALUATION OF THE ICBM DEACTIVATION PROGRAM

Maximum Reutilization of Assets (Missiles and Sites/Complexes)

As of 22 June 1966, over $900,000,000. of excess equipment, including missiles, had been obligated for reutilization. This amounted to 70 per cent of the original cost. All missiles, Atlas E, F, and Titan I, had been removed from sites/complexes.* They were transported to selected storage points, Norton Air Force Base (AFB) and Mira Loma Air Force Station (AFS). These missiles are retained and maintained in storage status for possible use in future Air Force programs.

As far as the missile site/complexes were concerned, the United States Air Force (USAF) retained selected sites for future uses.** The remaining sites were disposed of by General Services Administration (GSA) in the following manner: (1) Donated through the Department of Health, Education and Welfare (DHEW) to public

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* Date for final movement of missiles to storage sites was 29 Apr 1965.

** As of this date there are 4 sites being retained. Beale Chico site (C) for a MAC Classified project, Mt Home Oreana site (B) and Lowry Bennett Site (725A) for AFSC space project and Lowry Elizabeth Site (725C) for SAC classified project.

Agencies. (2) Real estate sale to private parties or companies. This disposition and reutilization progress exceeded Department of Defense (DOD) and USAF expectations.[1] GSA also disposed of Sites directly to other federal agencies such as FAA, National Science Foundation and Bureau of Mines.

Compressed Screening Schedules Through Concurrent Actions

Screening of excesses was one of the most important tasks of the deactivation program. Through the cooperation of Air Force agencies, DOD, GSA and Defense Logistics Supply Center (DLSC) the screening task was accomplished concurrently. Concurrent screening allowed for the early completion of the task, and the emphasis placed upon screening by AFLC DTAF and the thorough screening process by all agencies resulted in the extremely high reutilization factor.[2]

Accomplishment of Deactivation - With Minimum Expenditure of Funds and Manpower

Through every phase of the deactivation program, minimum cost and manpower were prime considerations in every decision. The SBAMA DTAF studied and considered every feasible way to transport missiles economically. The cost of transporting missiles was within the estimated cost. Norton AFB and Mira Loma AFS provided storage and organic maintenance for missiles, which saved the cost of contractor support. The use of military personnel

for preservation of sites, removal of selected government-obligated equipment, care and custody of sites, diesel generator testing and removal, Lincoln AFB site 12 display prototype, and other testing and prototype efforts saved the cost of obtaining manpower from other sources. Diesel equipment was tested by military personnel. Removal was by Service and Service/Salvage contract. Prototype removal, Larson AFB, by removing through powerhouse dome intact. However, costs were reduced by dismantling procedure and removing via portal elevator opening.

The Task Force guidelines were that service contracts would be used on all retained sites. Based on the August 1965 Predisposition Planning Conference and the obligations against the retained sites a budget of $1.5 million dollars was approved. Through use of blue-suit personnel and realignment of obligations from retained sites to disposal sites, only $633,275 of the budgeted funds were expended.

The conversion from diesel electrical power to commercial power at the sites/complexes resulted in reduced cost and manpower, and the early conversion to commercial power contributed substantially to an earlier availability of the diesel generators for the high priority Southeast Asia project. Additionally, there was a gradual reduction in manpower and funds as the program neared its completion. As of 22 June 1966, this goal was within the estimated cost figures.[3]

Use of Missile Spares or Excesses to Preclude New Buys in Other Programs

Early in the program, even before screening by other government agencies, AFLC DTAF directed all Item Managers to conduct intensive screening of excess spares to determine possible requirements. Also, the Systems Support Managers (SSM) reviewed all Titan I excess spares to determine Titan II program requirements. Atlas and Titan I excess spares were reviewed by the SSMs to determine spare support for future Booster programs at Vandenberg AFB. Where requirements were established, excess spares were transferred to the recipient's account. These actions have precluded new buys which otherwise would be needed to support other weapons and programs.[4]

Item Managers also screened the lists of installed equipment and excess Mobile AGE (Maintenance Equipment) in addition to spares to determine requirements.

As a result of experiences gained in this program, the Deactivation Task Force suggested the following for future programs.

Physical Inventory Vs Accountable Records

Time permitting, a physical inventory should be accomplished on excess equipment to assure a baseline from which to work. Accountable records have a built-in lag time and machine runs are only accurate for a specific date.

Auditable Trail

All actions pertaining to disposition of the excess equipment should be documented so that the actions can be readily followed by interested auditors. A continuous audit is recommended to assure proper handling of the excesses and progress of the program.

High Dollar Items

An early decision should be made concerning the removal of high dollar and/or long lead time items that are also popular with DOD agencies. All diesel generator units and air conditioners over 100 tons were removed during this program. Consideration should be given in following programs, to remove all high pressure and cryogenic vessels such as LOX, H_2, and nitrogen tanks and store them if there is no immediate need.