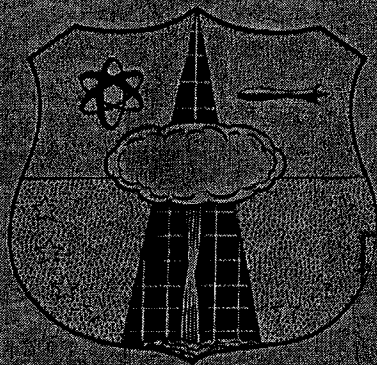


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HEADQUARTERS
AIR FORCE SPECIAL WEAPONS CENTER
AIR FORCE SYSTEMS COMMAND
KIRTLAND AIR FORCE BASE, NEW MEXICO



AFSWC'S CAPABILITIES IN LIGHT OF
RESUMED NUCLEAR TESTING

25 September 1961

DECLASSIFIED WITH DELETIONS

Authority E.O. 12958 as amended

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14. ABSTRACT This paper presents an analysis of the technical and support capabilities of the Air Force Special Weapons Center in light of the resumption of nuclear testing. The resumption of nuclear tests on either a limited or restricted basis will increase the AFSWC workload across the board due to: a. Nuclear effects tests to study space effects (communications and kill mechanisms) and surface and atmospheric effects (hardening, electromagnetic and biomedical). b. Weapons development tests will result in new weapons, subsystems, safety studies, and systems integration work.					
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OUTLINE

• **Technical Requirements**

Center Recapitulation

Research Directorate

Development Directorate

Support Requirements

• **NOTE: Technical Requirements are spelled out for three Categories.**

**Category I Existing Requirements which are
Independent of Nuclear Tests**

**Category II Additional Requirements for Operation
NOUGAT (Underground only)**

**Category III Additional Requirements for Operation
NOUGAT - with Atmospheric Tests**

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

SYNOPSIS

This paper presents an analysis of the technical and support capabilities of the Air Force Special Weapons Center in light of the resumption of nuclear testing. The resumption of nuclear tests on either a limited or unrestricted basis will increase the AFSWC workload across the board due to:

- a. Nuclear effects tests to study space effects (communications and kill mechanisms) and surface and atmospheric effects (hardening, electromagnetic and biomedical).
- b. Weapons development tests will result in new weapons, subsystems, safety studies, and systems integration work.

The capability of AFSWC to provide Air Force support of nuclear tests in accordance with ARDCR 23-11 has been dissipated as a result of deactivation of the 4950th Test Group (Nuclear). Resources required for the support of nuclear tests are dependent on restrictions placed on tests (i.e. underground, space and/or atmospheric).

[REDACTED]

[REDACTED] A
[REDACTED]

AFSWC TECHNICAL MANPOWER REQUIREMENTS

III

II

I

Organization	Existing Requirements Independent of Tests			Additional Requirements for NOUGAT (Underground only)			Additional Requirements for Atmospheric Testing in NOUGAT		
	Off	Arm	Civ	Tot	Off	Arm	Civ	Tot	Tot
Research Directorate									
Analysis Division	14	0	0	14	0	0	0	0	0
Biophysics Division	15	11	0	26	0	0	0	0	0
Structures Division	12	0	0	12	3	0	0	3	3
Physics Division	34	11	0	45	24	0	3	27	27
Special Projects Division	0	0	0	0	0	0	0	0	0

Development Directorate									
Safety Division	22	0	3	25	0	0	0	0	0
Weapons Development Division	19	0	3	22	4	0	1	5	5
Weapons Support Division	0	0	0	0	6	0	4	10	10
Weapons Systems Division	0	0	0	0	13	0	3	16	16
Weapons Power Division	0	0	0	0	0	0	0	0	0

TOTAL 116 22 6 144 55 0 16 71 38 0 3 34

AFSWC TECHNICAL MANPOWER REQUIREMENTS

Development Directorate

a. Safety Analysis and Development Division

I -- The requirement for manpower resources has been documented in the following AFSCC letters: (1) AFSCC letter, subject: "Request for Manpower Spaces for Nuclear Safety," dated 9 June 1961, and (2) AFSCC letter, subject: "Nuclear Reactor Safety Program," dated 21 September 1961. This requirement has become more critical since the above letters were forwarded due to the ever increasing backlog of analyses and studies which have been beyond the capabilities of AFSCC to perform.

	<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
Nuclear Weapons Safety Effort	18	0	2	20*
Nuclear Reactor Safety Effort	4	0	1	5**

* 13 of the initial requirements for 33 spaces have been provided from within AFSCC resources, leaving a requirement for 20 additional spaces.

** Six of the initial requirements for 11 spaces have been provided from within AFSCC resources, leaving a requirement for five additional spaces.

II & III -- No additional manpower required.

b. Weapons Development Division

I -- Summarizing succeeding paragraphs, the total requirements associated with approved and proposed vulnerability efforts are:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
19	0	3	22

The initial requirement for manpower resources to implement applied research effort in Vulnerability, as proposed by AFSCC and approved by Headquarters AFSC, as Project 8809, is documented in the Form 613 as follows:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
7	0	0	7

[REDACTED]

IF the Vulnerability Sourcebook effort, approved by the Technical Advisory Panel (TAP) of the Joint AEC-DOD Vulnerability Board, is levied on AFSWC, as has formally been indicated, an additional manpower requirement exists as follows: Reference AFSWC letter (SWO), to Hq AFSC (SCS & SCT), dated 20 Sep 61, subject: (U) "AFSWC Support of TAP in Development of Vulnerability Criteria Sourcebook."

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
4	0	1	5

In addition, in order to implement the specifically defined Air Force directed program recently proposed to the Joint AEC-DOD Vulnerability Board in Washington and for which AFSWC is designated as the cognizance agent, further augmentation of the Vulnerability effort will be necessary as follows:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
8	0	2	10

II -- In order to assure prompt integration of Air Force weapon system nuclear vulnerability requirements into a nuclear testing program such as NOUGAT it will require additional manpower. As a minimum, the functions of these people will be: (1) Maintain continuous cognizance of USAF Nuclear Weapon System Vulnerability needs which might be solved or initiated by means of live nuclear tests. (2) Assure recognition of these needs through existing channels for stating these requirements both within AEC and DOD. (3) Be technically competent to assure proper design of tests necessary to determine required information. (4) Assure prompt integration of test results into all appropriate weapon system efforts and vulnerability agencies.

To satisfy these functions for an operation of magnitude comparable to that proposed in NOUGAT would require the following:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
4	0	1	5

III -- To support the USAF requirements for Vulnerability, weapon development efforts, instrumentation efforts, and integration of USAF requirements through AEC-DOD liaison channels would require:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
7	0	1	8

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

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a. Support Equipment Division

I -- None

II & III -- The impact of nuclear testing upon the Support Equipment Division manifests itself in two ways:

(1) The major effort will be the engineering support in the detailed planning, implementation, collection of data and analysis of the results of these tests directly or indirectly affecting the B-52/47, B-70, B-38, GAM-77/87, ICBM's, F-100, F-102/106, F-104, F-105, GAM 83B, GAR-11 and IM-99 systems. The majority of this engineering support will be tendered directly to the Aerospace Systems Division and the Weapons Development Division of the Development Directorate, AFMPC. It appears that this support can best be tendered by those engineers who are currently providing engineering support to these systems, since individual engineers sufficiently qualified in all aspects of these systems are not in existence. After a critical examination of the workload and resources of the Support Equipment Division, it is anticipated that this increased effort will require a minimum augmentation of authorized strength to the extent of:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
6	0	3	9

(2) The second area of effort will be in the detailed planning, programming, implementation, etc., of tests of nuclear effects on selected weapon system components and subsystems for which this Division has primary development responsibility. Specific examples of these are: (a) The Air Target Fuse (currently used on the IM-99B and programmed for the GAM-9 and MGM-1. (b) The Passive Air Target Fuse (a new Infra-Red fuse currently under consideration for the MGM-1). (c) Electro-Explosive devices representative of those used in release and separation systems and switch actuation devices. (d) High current solid state diodes representative of those used in emergency separation systems.

Items such as these would be selected since it is recognized that there is a possibility that the effects of a nuclear explosion on these items might cause the inadvertent release, premature detonation, or judding of the carried weapon, even though such an explosion is beyond the range of a direct weapon or aircraft kill.

It is anticipated this effort will require a minimum augmentation of the Division's authorized strength by one technical civilian:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
0	0	1	1

SECRET

[REDACTED]

In summary, the increase in effort on the part of the Support Equipment Division in support of nuclear testing of HUGUAT or similar series would require a minimum augmentation of current authorized strength to the extent of:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
6	0	4	10

d. Aerospace Systems Division

I -- None

II & III -- The resumption of nuclear testing dictates the Aerospace Systems Division assume the following additional functions: Provide Air Force representation as required, receive and collate test data, evaluate and analyze test results, provide conclusions and recommendations to appropriate Air Force agencies, and aid in implementation of weapon system changes dictated by test results.

The nuclear testing in progress will generate an increased workload for this Division in the specific areas defined in above, and is as follows:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
13	0	4	19

Modifications and changes to weapons and also weapon systems will require re-evaluation of loading and delivery techniques. New technical data will be required for the following: fit checks, new configurations, ballistic delivery modes, and new operational concepts. The resultant changes and revisions to special weapon technical orders will impose an additional workload upon the Handbook Data Branch and requirement for the following:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
0	0	3	3

For the GRISON project, three additional engineers are required in the Aerospace Systems Division to insure the orderly development of a Systems Plan and its implementation. The Test Plan and the management thereof will require rigid and constant supervision to insure that the facility requirements at the test site are fulfilled. Close coordination between all agencies either governmental or contractual will be maintained to insure that all requirements and specifications are adhered to. Engineering support will be required to make certain that hardware developed

[REDACTED]

[REDACTED] **[REDACTED]**

[REDACTED]

for the proposed test completely fulfill the requirements levied as a result of Basic Research that has been accomplished. The Safety Requirements associated with tests of the vehicle will be administered to insure that the stringent requirements of such an effort are fulfilled. This increase in workload will dictate the need for the following:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
3	0	1	4

In summary, the total Aerospace Systems Division requirements associated with HUSMAT and atmospheric testing are:

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
18	0	8	26

c. Nuclear Power Division

I & II -- None

III -- Additional manpower is required for determination of the vulnerability of space nuclear auxiliary power systems to radiation and blast. The analysis of weapon data (bomb debris, etc.,) is also necessary for application to reactor reentry problems. The results of these analyses will be directly applicable to satellite systems containing nuclear auxiliary power units, such as MIDAS, SNAP SHOT, etc.

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
7	0	2	9

[REDACTED]

[REDACTED]

[REDACTED]

3. Research Directorate:

a. Analysis Division

I -- The space authorizations for the Analysis Division have been continually reduced over the past eighteen months primarily because of the low priority (850) assigned to Project 7812. As a result only 10 spaces are currently authorized this function. As a result the following efforts were discontinued.

- (1) Support of AFMDC in interpretation of test data from F106-4B-1 firings.
- (2) Assistance to the Development Directorate in CLAW studies.
- (3) Study of "Dead-Man Switch" concept for strategic weapon delivery.
- (4) Participation in SWV project "Proximity Fused HTA Rocket" (Modified 4B-1 firings).
- (5) Support of Blue Scout Computations.
- (6) Administration of BOSS (Boeing) contracts and IR Guidance Degradation (Boeing) contracts.
- (7) Calculation of Thermal Safe Escape Ranges.

With one man committed for full time work on plans for resumed nuclear testing and one committed to half time in RADON and quarter time on the weapons vulnerability program, the effective strength for application to analysis type studies is hardly sufficient to support one study effort.

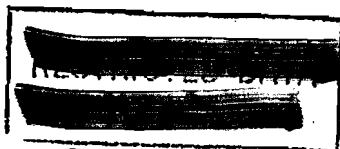
There are presently 4 major studies to be accomplished as soon as possible. The AFSC directed study on Gigaton Application and Implication, a study in support of Physics Division on the application and implication of "Blackout" to AF systems, a continuance of the study on application of Orion type payloads, which is a task under Project 3775 and a continuance of the AFSC directed study on application and implication of Casaba/Howitzer. An interim report on the latter study is in publication form at present.

Cat I (Required)

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
14	0	0	14

Cat II & III

0	0	0	0
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b. Physics Division

The Physics Division workload has increased substantially in FY 62. The R&D contractual effort of the Division has increased from about 6.5 million in FY 61 to about 12.5 million in FY 62. In addition, preparation for meaningful use of the new Nuclear Warfare Laboratory will require a doubling of the in-house experimental effort by the end of FY 62. The additional effort for the lab should be programmed, starting immediately since detailed planning of experiments must precede actual occupancy and arrangement of experimental equipment. The increased contractual effort represents increased theoretical and experimental effort on X-ray, Argus, Blackout, EM pulse, transient radiation effects, re-entry vehicle and warhead vulnerability, bomb debris motion in high altitude environment and Project Orion.

Any reduction in the planned build up of the division will reflect directly on the Directorate ability to field meaningful experiments on nuclear tests, experiments which will verify and/or modify results of the present and planned theoretical and laboratory simulation program. One lesson learned in past years of nuclear testing was that very little useful information was gained on difficult nuclear experiments if adequate theoretical and laboratory effort had not preceded the design of the experiment. Of equal significance is the fact that the theoretical and laboratory simulation effort will be the basis for system and operational planning without final verification if proper nuclear tests are not approved. Therefore it is imperative that the present and planned Physics Division program be adequately supported, tests or no tests.

Cat. I*

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
34	11	0	45

*Includes Project Orion FY 62 requirements independent of nuclear experiments.

Cat. II

Deleted

In addition the division will conduct experiments to investigate "Casaba" feasibility, effects and to check out experimental techniques for planned nuclear experiments on Project Orion.



In addition during this period underground experiments for Project Orion may be approved. If so, additional manpower will be required to provide technical direction and management for the experiments. Assistance from the Development Directorate is expected. The asterisked numbers below indicate the increased manning necessary in the Research Directorate if Orion underground testing is permitted.

If manpower augmentation is not possible the following areas of work will be reduced by 19 man years for the FY 62 (independent of Project Orion considerations).

- (1) Nuclear cloud debris motion
- (2) Communication blackout
- (3) EM pulse phenomenology
- (4) Turbulent Argus
- (5) Fireball Blackout
- (6) Transient radiation effects

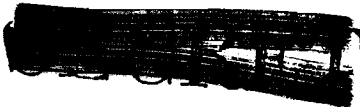
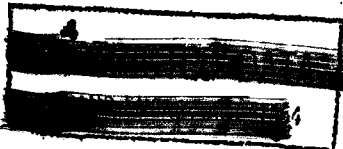
If testing an Orion is approved without manpower augmentation the reduction of effort in the above areas will be an additional 8 man years in FY 62.

	<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
Nougat	17	0	2	19
*Orion	7	0	1	8

Cat. III

If reasonable yield Tethered Balloon Shots are included in Nougat, the Physics Division will either be responsible for or involved in experiments concerning the EM phenomena and effects. This will be in addition to the Marshmallow experiments. If there is no manpower augmentation for this increased effort, the work enumerated in (1) thru (6) under Cat II will be reduced by an amount corresponding the manpower requirements shown below. If Nougat Balloon Shots are approved, it is reasonable to anticipate approval of the planned balloon shots for Project Orion, if so - manpower augmentation or corresponding reduction in the Physics program will be necessary. The asterisked numbers below indicate the requirements for Orion balloon experiments in addition to those shown in Cat II for Orion.

	<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
Nougat	3	0	0	3
balloon				
*Orion	3	0	0	3



c. Biophysics Division

I. During the past year, limited manpower allocations has precluded accomplishment of programmed efforts in the following areas.

(1) Plutonium reaction with exotic missile fuels in the event of accident in order to determine radiation hazards during such an eventuality.

(2) Pulse reactor simulation of weapon radiations.

(3) Neutron and gamma transport at all altitudes.

(4) Support to Hq USAF in the preparation of new manuals and revision of existing manuals in the area of AF operation under nuclear environment.

(5) Support to AF commands on operational problems dealing with the nuclear environment.

(6) Maintaining cognizance and control of available radac instrumentation and developing new specialized radac instrumentation as required in the field and AF research laboratories.

(7) Adequate support of radiation hazards experiments in tests of Pluto and Tory systems.

(8) Timely analysis of Bio-astronautics data in support of man in space programs.

(9) Support to the USAF Inspector General, Directorate of Nuclear Safety.

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
15	11	0	26

II. Participation in the Nougat series would consist of the following:

(1) Close-in radiation spectrum from weapons detonations.

(2) Radiation environment in hardened sites.

(3) Investigation of the particulate plutonium oxide in the event of non-nuclear yield.

(4) Field test of presently constituted Air Force radac instruments.

Seven officers are required to support the Nougat series. However, since simulation efforts would be curtailed in order to support actual tests, no additional manpower will be required over and above the 26 in Category I.

[REDACTED]

III. If atmospheric testing is done, additional biomedical research efforts would be accomplished. These would include:

- (1) Incapacitating effects of radiation from low yield weapons.
- (2) Refinement of biological dosimetry by comparison of depth dose versus air dose.
- (3) Plutonium inhalation hazards in the event of non-nuclear destruction of a weapon.

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
6	0	0	6

d. Structures Division

I. The Structures Division responsibilities has increased considerably for FY 62. Their contractual effort has increased from \$0.6 million in FY 60 to \$2.5 million in FY 62, will expand to 3.5 million in FY 63. In addition they are responsible for the technical program for the new 6' shock tube facility currently operated by the Univ. of New Mexico under contract. They have increasing responsibility for consultant and advisory service to BSD, ASD, ESD and the operating commands relative to protective construction. The division manning has increased only about 20% for a 200 to 300% increase in workload. Unless additional manpower can be authorized they will be unable to provide the consultant and advisory service to the AFSC divisions and major commands except on a minimal basis and less than satisfactory time scale.

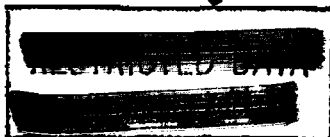
<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
12	0	0	12

II. If Category I manpower were available the division could accomplish their participation in Mougat without additional spaces by shifting some emphasis from simulation to experimental effort on Mougat. If manpower is not increased the division will participate in the series but at the expense of technical management and direction of the contractual and reporting program.

<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
3	0	0	3

III. The tethered balloon shots on Mougat offer the first opportunity for badly needed experiments on air blast coupling. The yields and height of burst parameters will determine the extent of useful participation by the Structures Division. If conditions are right for reasonably high overpressures at the surface, an all out effort will be initiated to include meaningful experiments.

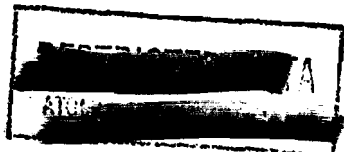
<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
5	0	0	5



e. Research Directorate Totals

I.	<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
	75	22	0	97*
II.	27	0	3	30
III.	17	0	0	17

*This total is the minimum required to accomplish programmed work as described in the previous sub-paragraphs, including that referenced in the "Review of AFMRC Manpower Requirements and Resources" dated 29 May 1961. This also includes the requirements for Structures research and Directorate of Nuclear Safety Research which have been the subject of separate correspondence.



AFSWC SUPPORT REQUIREMENTS

**AIR SUPPORT REQUIREMENTS FOR
OPERATION NOUGAT**

Initial air support requirements for operation NOUGAT are spelled out in a message from Commander, Field Command DASA, to Chief, DASA with info to AFSWC. This message (9-1-8370), dated 22 September 1961 was subsequently retransmitted to AFSC Headquarters. This message stated the feasibility of accelerating Operating NOUGAT to maximum extent and the possibility of resuming atmospheric testing involving detonations similar to those of HARDTACK II. This acceleration could take place on extremely short notice. The message stated that requirements will approximate the following:

- (1) Air Operations Center, Mercury Nevada.
- (2) Ground support augmentation at Indian Springs (possibly 200 to 250 qualified personnel.
- (3) B-57 support (cloud sampling) underground shot two plus one backup aboveground four plus two backup.
- (4) B-57 and/or T-33 aircraft for high altitude cloud tracking one aircraft plus one backup.
- (5) One suitable transport aircraft plus one backup for low altitude cloud tracking.
- (6) Liaison aircraft for security sweeps liaison and photography two aircraft plus one backup.
- (7) Possibility of one C-54 plus one C-47 backup for device transport.
- (8) Air shuttle (Albuquerque to Indian Springs and return and other points as necessary) may be required to support the above.

A letter has been received from Commander, Field Command DASA. This letter, attached, requests that an air support party be provided by the AFSWC to the NTS for the remainder of Operation NOUGAT.

The following resources are required to provide minimum support outlined above. These estimates are based on experience gained in HARDTACK II.

AIR OPERATIONS CENTER

Ops Staff Officer	1416	1 Major
Staff Intercept Comptroller	1616	1 Major
Intercept Comptroller	1644	1 Capt
Intercept Comptroller	1644	<u>1 Lt</u>
	TOTAL	4
Gr Radar Supt	30390	1 CMSgt
AC & W Maint Tech	30372	1 MSgt
AC & W Radar Repairman	30452	1 SSgt
Gr Com Maint Tech	30472	1 TSgt
Admin Clerk	70250	<u>1 SSgt</u>
	TOTAL	5

In addition, the following are required for overall coordination of air support activities at ISAFB:

Ops Staff Officer	1416 or 1435	(1) Major
Admin Clerk	70250	(1) SSgt
Dispatcher		(1) SSgt

Two L-20 duty pilots are required for security sweeps, aerial photography and cloud tracking.

A Staff Communications officer should be available at the earliest opportunity to supervise installation and maintenance of the AN/USQ-12 equipment at the NTS, installation of communications between the Air Operations Center at the NTS and Indian Springs Operations; to obtain frequencies both UHF and VHF for use at the NTS; and to advise personnel at the NTS of power requirements, antenna requirements and lines.

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This effort also requires an officer to act as OIC and senior coordinator, who may operate at the NTS, Indian Springs, or Kirtland.

INDIAN SPRINGS AIR BASE SQUADRON

At the present time Indian Springs AFB is manned by 146 airmen, 12 civilians and 3 officers of the Tactical Air Command. These are not enough personnel to provide support for air operations during a test series. Through discussion with Major Marks, Squadron Commander, it cannot be emphasized strongly enough that in the event of future support requirements at ISAFB, augmentation of personnel to support and operate the base will be mandatory. This small operation was significant enough in size to preclude the accomplishment of their basic mission. In other words, at any time a requirement is imposed on this base over and above the normal gunnery range detachment activities, they are rendered incapable of performing their primary mission. To this extent, Lt Colonel Smith of Nellis AFB instructed Major Marks to fly no missions but rather to supply the L-20 aircraft and permit the AFSWC pilots to perform this duty

At the time Indian Springs AFB was transferred from AFSC to TAC, it was manned by 14 officers (160 airmen and 42 civilians). This strength was maintained during an interim period with no testing activity at NTS. Unit support equipment of the 1211th Test Squadron will need to be transported to the NTS in the early stages of the operation, as will other types of equipment, such as fork lifts, and decontamination trucks. This will call for manning support at Indian Springs at an early date. The base has no such capability at this time

During test periods, the Air Base Squadron was augmented to accomodate the additional workload. As an example, the following figures reflect peak manning strengths at Indian Springs during HARDTACK II. If atmospheric tests are allowed at NTS, which appears very likely, similar authorization will be required:

<u>UNIT</u>	<u>PEAK</u>	<u>AVERAGE</u>
Headquarters	18	11
4926th (Sampling)	49	37
4935th (Air Base)	251	251

SECRET

SECRET

UNIT	PEAK	AVERAGE
4935th (Air Base)	251	251
4952nd	67	53
Other	<u>27</u>	<u>21</u>
	412	373

It is not yet clear whether TAC will continue to operate Indian Springs, or if ISAFB will be transferred back to AFSC (AFSWC). In either event, additional manning as outlined above will be required. The degree of manning is contingent on the scope of Operation NOUGAT. However, even if NOUGAT remains an underground series, some augmentation will be required.

TRANSPORT AIRLIFT

Practically all of AFSWC's air transport aircraft and flying hours are SI coded to support CRT flying. The Center has just barely enough duty pilots assigned to provide instructor and supervisory capability for its CRT flying. In fact, two of these people have already had to be used as L-20 pilots in the earlier ANTLER and SHREW events. Aircraft and flying hours in the SI coded areas are very closely controlled. AFSWC will be able to provide airlift from its present capabilities at the outset, but a program such as outlined in the TWX will require the assignment of additional aircraft and primary duty aircrews, together with additional test support coded flying hours, and the maintenance capability to provide them.

SECRET

RESTRICTED DATA

23 SEP 1961

FCWTL

SUBJECT: Air Support Party

TO: Commander
Air Force Special Weapons Center
Kirtland Air Force Base, New Mexico

1. Experiences during the ANTLER and SHREW events have shown the necessity for air controllers and coordinators at the Nevada Test Site during Operation NOUGAT. These personnel are required to control aircraft over the test site, provide staff assistance to the DOD Operations Coordinator, provide centralized briefings for air crews, and coordinate the administrative and logistical support of the test aircraft and crews.

2. Request that an Air Support Party be provided by the AFSWC to the NTS for the remainder of Operation NOUGAT.

3. This party should be capable of coordinating the operational activities of up to eight aircraft of various types, and should be capable of expanding this capability on short notice. One officer in this party will be used as a staff assistant to plan and coordinate aircraft participation in current and future tests at NTS. This individual should be a qualified operations officer capable of providing sound advice to the DOD Operations Coordinator and the Test Manager. Air Support Party operations are described in the AEC-NTS SOP, NTSO-0103-10 and NTSO 8808-01. Detailed operations will vary slightly from those outlined in the SOP. The majority of aircraft operations will take place during daylight. Aircraft will be based temporarily at Indian Springs Air Force Base, Nevada.

4. The Air Support Party should be prepared to perform its duties not later than 28 September 1961.

H. C. DONNELLY
Major General, USAF
Commander