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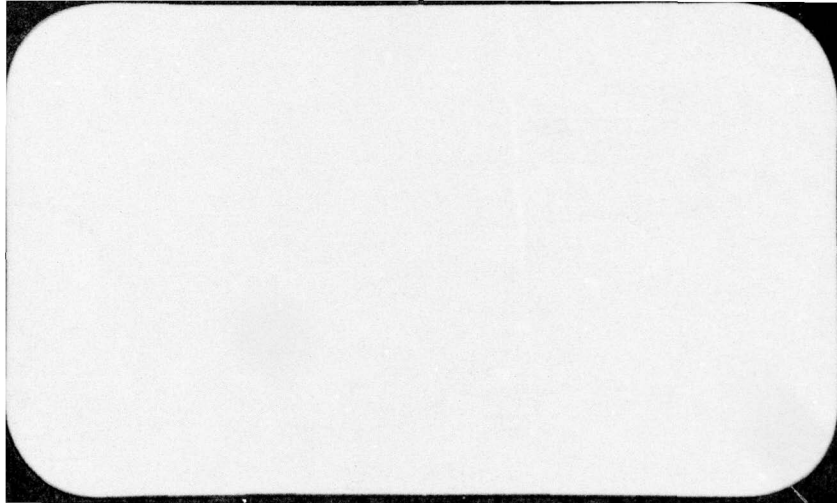
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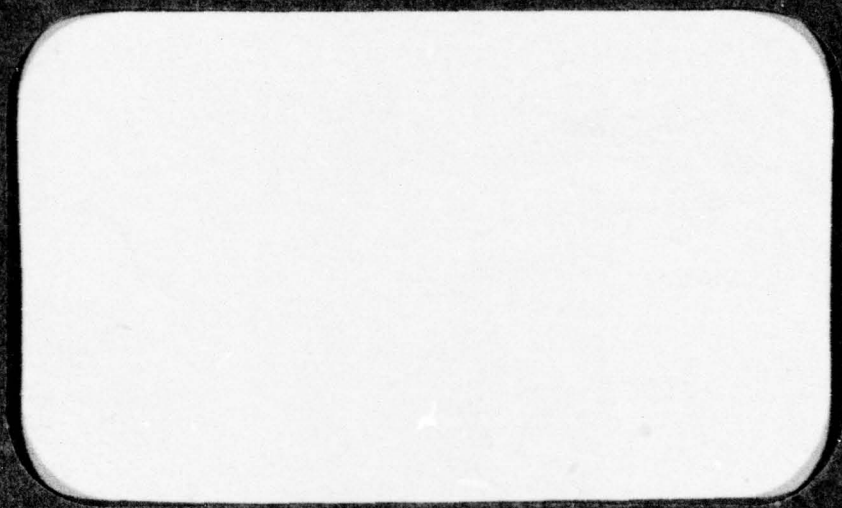
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Staff Memorandum
APPENDICES TO
SAGEBRUSH MANEUVER TESTS:
APPLIED AND THEORETICAL

Edgar L. Shriver

May 1956

Training Methods Division

Approved

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Appendix A

SAGEBRUSH OVERALL TACTICAL PLAN

prepared by

Col. Channon, AMTEG

1. Introduction

During this briefing, I will discuss the General and Special Situations for Exercise SAGEBRUSH and outline the organization for each phase of the maneuver to include both U.S. and Aggressor Forces.

2. General Situation

As the first step, let us discuss the general situation. Strained relations have existed since 1947 between Aggressor and Western oriented countries. Difficulties manifested themselves increasingly throughout the world during 1951-1955. By mid 1954, international relationships became grave. Early in 1955, Aggressor formed a coalition and invaded the Southern United States by Amphibious operations from the Gulf of Mexico. By March, 1955, Aggressor had established a firm bridgehead on the southern coast of the United States, encompassing Houston-Beaumont-Lake Charles and New Orleans.

Following intervention by the United Nations, both sides were persuaded to maintain a prolonged truce pending diplomatic negotiations. The truce established a demarcation line, with a neutral zone on either side, between the opposing forces.

During the truce, both sides maintained their forces in readiness for combat. Aggressor established military government and U. S. forces established civil affairs.

This brings us up to the General Situation as shown on this map. The truce zone is shown here; here is the Red River, here is Lake Charles and here is Camp Polk. I will leave this map exposed throughout the remainder of the briefing. Are there any questions on the general situation?

Special Situations

Next let us look at my first chart which gives the maneuver phases. I will leave it exposed very briefly, letting it serve only as an introduction to more detailed discussion on each phase. Phase III (U.S. Defensive) includes a retrograde action and Phase V (U.S. Offensive) includes a river crossing.

Next, let us discuss Phase I. Phase I covers the period 1-7 Nov and consists of:

- (1) Units are closed into the maneuver area by 2400 hours, 7 November.
- (2) Unit umpire instruction conducted at Camp Polk by the Umpire Group School is completed.
- (3) Evaluator instruction completed.
- (4) Units conduct reconnaissance of initial positions in preparation for participation in Phases II and III.
- (5) Units conduct, as practicable, so much of the following training as may not have been completed at home stations:
 - (a) Additional training desired by unit commanders.
 - (b) Joint air-ground operations.
- (6) Prolonged truce continues.

Phase II covers the period 8-14 Nov and consists of:

- (1) Ground and aerial reconnaissance is conducted in consonance with truce terms.
- (2) Umpires deploy to stations in accordance with the Umpire Plan.
- (3) U. S. Forces and Aggressor Forces conduct Joint CPX, 10-13 Nov.
- (4) Aggressor Forces conduct Joint CPX, 10-13 Nov.

(5) Umpire Group conducts communication test of Umpire Communication System on 14 Nov.

(6) Intelligence build-up continues.

(7) Civil affairs operations begin for U. S. forces.

(8) On 15 Nov, a U. S. reconnaissance aircraft escorted by eight fighters is intercepted by twelve AGGRESSOR fighters. The interception takes place at 40,000 feet in the vicinity of Ludington, La. approximately one and one-half miles north of the truce line. In the ensuing action, four AGGRESSOR fighters are destroyed. U. S. Forces lose the reconnaissance aircraft and two fighters. Both sides send extensive fighter reinforcements and a running battle develops.

(9) By 2400, 15 Nov, both sides have their forces in readiness for combat.

Phase III covers the period 15-21 Nov:

U. S. forces are organized as shown on this chart. Simulated units are indicated in broken lines. Aggressor forces are organized as shown on this chart. U. S. units actually playing aggressor units are shown by an asterisk. Note that the aggressor division is commanded directly by an aggressor army which is compatible with aggressor organization and doctrine, and which may provide interesting data for future studies in organization and command structure. In accordance with the general situation the play of the maneuver will begin at daylight 16 Nov on order from Maneuver Director Headquarters. Hostilities will be commenced by a large scale AGGRESSOR air atomic attack followed by a ground attack from south to north in violation of the UN demilitarized zone.

a. During this phase, AGGRESSOR forces will be given a mission to attack and destroy U. S. forces in zone and seize communications and supply centers 75 to 100 miles north of the truce zone (Eldorado and Monroe). Aggressor Air, with numerical superiority, will launch a maximum-effort air offensive utilizing all air weapons including nuclear weapons with the mission of destroying U. S. air forces and supporting the ground action. A coordinated airborne assault in RCT strength will be conducted during this phase. AGGRESSOR ground forces, also with numerical superiority of forces, will conduct offensive operations, (attack and pursuit) to include a coordinated airborne and armored assault of the Red River, unless prevented from doing so by U. S. forces. It is envisioned that during the course of the AGGRESSOR assault of the Red River, the commander of the US forces with the weapons at his disposal will deny that crossing, and will promptly defeat in detail any AGGRESSOR forces north of the river.

b. U. S. forces, having been given a mission of delaying the enemy south of the Red River for approximately seven days and conduct barrier and denial operations will finally occupy defensive positions on the Northern bank of the river and attempt to stop AGGRESSOR's advance to the North. U. S. air forces will be released for a pre-planned counter-air offensive soon after being attacked by AGGRESSOR. Air action will be concentrated on counter-air operations with the objectives of gaining air supremacy over friendly terrain and local air superiority over hostile terrain. Other normal air operations will be conducted within capabilities. U. S. ground forces will withdraw according to a pre-arranged barrier plan

approximately 50 miles to the north across the Red River. Delaying action, counter-attacks, spoiling attacks, air and ground delivered atomic support, and extensive barrier and denial operations will be included.

Phase IV covers the period 22-27 Nov:

During this phase, critiques will be conducted by unit commanders of Operations conducted during Phase III, and the forces of both AGGRESSOR and US, to include both ground and air, will be reconstituted to provide for numerical superiority of the U.S. forces over AGGRESSOR forces (ground and air). The remainder of the phase will be devoted on the AGGRESSOR side to the preparation of defensive positions south of the Red River and extensive patrolling by small units to determine the buildup of the enemy situation. On the U.S. side, extensive probing and preparation for the river crossing will take place. (Activities of evaluators)

Phase V covers the period 28 Nov - 6 Dec:

Transfer of certain units from AGGRESSOR to U.S. forces prior to Phase V will be accomplished to effect a shift in numerical superiority to U.S. forces for Phase V. However, it should be noted that this numerical superiority will, at best, be marginal. Decisive numerical superiority can readily be obtained by adjusting frontages. U.S. and AGGRESSOR forces for Phase V are as shown on these charts. Again simulated units are indicated in broken lines. (Point out the changes)

U. S. ground forces will be ordered to assume the offensive, attack rapidly to the south and destroy the enemy in their zone. They will employ a rapid exploitation of the U.S. river crossing to seize deep objectives (50-70 miles) with armored columns exploiting the crossing. Operations will be supported by extensive use of atomic weapons.

a. In the air, maximum close support will be afforded ground troops consistent with requirements of counter-air, reconnaissance and interdiction operations. Priority to column cover when armored columns are deep in enemy territory will be provided. During this phase, airlift will be provided the U.S. ground forces for at least one air landed operation of at least regimental combat team or Inf Combat Command. In addition, at least one aerial resupply mission to each of the armored columns deep in enemy territory will be provided. Aeromedical evacuation will be played extensively.

b. Initially, the mission of the AGGRESSOR forces for this phase will be the defense of the river line. Extensive counter-air operations are contemplated and other air missions conducted within capabilities, including close support and interdiction missions delivering nuclear weapons. On the ground, AGGRESSOR forces will be organized and deployed in a manner to provide a strong defense of the Red River line. This will be followed by a withdrawal to the south, if forced. Extensive employment of barrier and denial operations and atomic support by ground delivery means during the withdrawal will be utilized.

c. It is visualized that the exercise will be permitted to develop into a rather extensive over-running of the AGGRESSOR forces by the US forces so that exceptional skill will be required on the part of the AGGRESSOR commander to extricate his forces and provide a reasonable defense, along a line approximately 50 miles south of the Red River. At this time, and upon completion of the air-landed operation in support of the U.S. advance, the tactical play of the maneuver will be terminated.

Phase VI covers the period of 7-16 Dec and consists of:

- (1) Critique by unit commanders of operations conducted during Phase V.
- (2) Critique of entire Exercise conducted by Maneuver Director Headquarters.
- (3) Turn in equipment.
- (4) Movement out of the maneuver area to be completed by 2400, 16

December. Are there any questions on the maneuver phases?

Next, I will discuss some of the general factors pertinent to Phases III and V, which are the two maneuver phases.

- a. Nuclear weapons are employed by both sides with the U.S. forces having a small advantage in nuclear capability.
- b. All delivery means considered operational are employed.
- c. Chemical, biological, radiological, psychological, and electronic warfare are employed by both sides as feasible, and the extent required for testing and training.
- d. Air operations include all types engaged in by theater air forces, i.e., counter air, interdiction, close support, reconnaissance, supply, evacuation rescue, and airborne (air landed and air dropped).
- e. All aspects of air defense are played by both forces.
- f. Civil affairs and Military government are played by the U.S. forces. Each U.S. commander plans and prepares to conduct civil affairs/military government operations as an integral part of his mission. Such operations are directed primarily to the support of the U.S. forces during combat.
- g. Free play prevails except when control is necessary to establish situations required to further maneuver objectives.
- h. Nuclear advantage is accorded U.S. forces through more efficient

a. Dispersion criteria based on maximum allowable densities of personnel and material.

b. Atomic preparation such that a virtually unopposed crossing is assured.

c. Large capacity of bridges compared to other crossing means.


d. Reduced construction time for bridging through use of erection aids.

In conclusion I will briefly discuss the organization of forces for the two maneuver phases (III and V). You will recall when I discussed these two phases previously, I displayed charts showing the composition of U.S. and AGGRESSOR forces. Some of these forces were actual while others were simulated. By injecting simulated units it is hoped to add realism in tactical planning, intelligence play, communication traffic, and liaison with adjacent, higher and lower units. U.S. NINTH ARMY will command three corps of a type field army. U.S. III Corps will participate in its present status as a fully organized and operational corps headquarters. U.S. XIX and XXII Corps will be simulated by a headquarters detachment similar to the next chart as will the simulated divisions in III Corps (Show chart).

This chart presents a recommended organization to simulate corps and division headquarters. Four of these detachments or a total of 80 officers and enlisted men can simulate a sufficient number of additional headquarters in both Phases III and V to provide both U. S. and AGGRESSOR ARMY Headquarters with a reasonably large command, and in the case of U.S. forces, both NINTH ARMY and III Corps with type army and corps respectively. Each of these headquarters detachments will contain a communications center, an operations section (combined G-2 and G-3), and an Umpire section. Each simulated

headquarters will be provided with teletype and high frequency radio facilities and be capable of 24 hours operation for normal operations, intelligence, and communication requirements.

This concludes the briefing. Are there any questions?


ORGANIZATION AND FUNCTIONING OF THE ATFA-1 FIELD ARMY

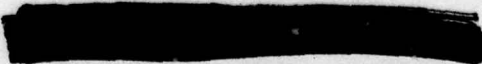
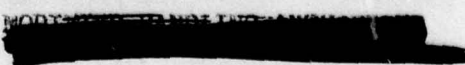
I. General Information on Organization and Functioning of ATFA-1 Field Army Corps, Infantry Division, and Armored Division - Prepared by Lt. Col. Dickey, AMTEG

1. Introduction:

The objective in battle has always been and will continue to be the destruction of enemy forces in the field. There may be other theories of gaining victory such as bombing his industry, terrorizing his population, etc., but World War II and the Korean War have shown to the honest-minded soldier that there is no substitute for victory and that the enemy's forces must be defeated in order to achieve that victory.

We now find ourselves somewhat in a tactical and strategic dilemma. After World War II, but before Korea, we thought of and planned for our next fight as being an atomic war. Then came the Korean War. For about 17 months we used non-atomic World War II methods until we finally retrogressed to World War I trench warfare before that war ended. So the prevailing question remains, "Will we fight on an atomic or conventional battlefield?" The answer to that question is certainly beyond our level, but we do find ourselves here preparing to test ATFA organization and doctrine - designed for the atomic battlefield.

Before we go any further, let us all understand the term "ATFA" - it means simply "a type Field Army" - but is designed to meet the needs of the atomic battlefield and also to be capable of fighting on the conventional battlefield. Since we are all more or less familiar with the conventional battlefield, let's skip over that and discuss briefly the needs of the atomic battlefield, upon which this ATFA organization and doctrine is based.

[REDACTED]

First, the general principles of concentration which emphasize the needs for detailed planning and rapid execution based essentially on speed and secrecy, followed by bold, rapid execution of the plan, are mandatory under ATFA. Particular attention must be given to the need of concentrating forces in terms of time rather than space. Because of enemy nuclear capabilities, security measures emphasized throughout and alternate means become a necessity.

Secondly, fundamentals of the penetration, the envelopment, the turning movement, and the frontal attacks remain essentially the same. However, objectives are much deeper, zones are wider and rapidity of execution is mandatory.

Third, fundamentals of exploitation remain essentially the same. However, the use of airborne forces and nuclear weapons increase the capability for exploitation.

Fourth, fundamentals of the defense and retrograde remain the same, but due to the wide frontages, vulnerability of enemy atomic strikes and increased need for mobility, the accent is on mobile defense.

Fifth, greater emphasis is placed on better and more distant reconnaissance, mass destruction weapons influence the balance of power between opposing armies rather than large manpower reserves as heretofore and there is an increased demand on artillery and aviation.

Sixth, the resultant strain on logistical and combat support troops to perform their functions effectively with a fast-moving, hard-hitting Army over widely dispersed areas.

This, then, is the foundation for the ATFA Field Army which we will test and evaluate during Exercise SAGEBRUSH.

[REDACTED]

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As you will recall in a previous period by Lt. Col. White, we will test and evaluate organization and doctrine pertaining only to the Field Army and Corps levels. However, to understand the complete picture, we should discuss the next level above and below, specifically Army Group and Division levels. I will start with the highest level and proceed down through the ATFA Division.

2. Theater Army and Army Group:

Staff Memo #12, Headquarters Exercise SAGEBRUSH, dated 16 September 1955, specifies that Maneuver Director Headquarters in SAGEBRUSH will represent the following:

- a. Theater Army
- b. Army Group
- c. Theater Army Support Command (TASC)

As a brief review, I will discuss the broad responsibilities of the first two mentioned. First, the Theater Army Commander - he is responsible to the Theater Command for the planning and conduct of operations of his forces not allocated to another subordinate command of the theater, the administration of his forces, and the provision of administrative support to other forces, as directed. Next, the Army Group Commander - his responsibilities are primarily operational. He is responsible for the overall operational direction to translate the plans and instruction of Theater Army into combat action. The Army Group is organized for strategic and tactical operations. It consists of a variable number of field armies - in SAGEBRUSH there will be the Ninth Army (actual) and two simulated Field Armies.

Theater Army Support Command (TASC) will be covered in a later presentation.

[REDACTED]

[REDACTED]
[REDACTED]

3. Field Army:

The Field Army is the next echelon below Army Group and is both tactical and administrative. It directs the tactical operations and provides for administrative support of assigned Corps and other forces. (Show Chart No.1) You will note that it consists of a variable number of Corps - one actual and two simulated Corps in SAGEBRUSH - and Army Combat and combat support troops. Each of you will be given an opportunity to make a detailed study of Army troops when we break down into test area groups. The one big change in organization of the Field Army is the Field Army Support Command (FASC). Col. Vandenberg will go over the organization and functioning of this new unit at a later period.

A fixed organization is not prescribed for the Field Army. The mission, area of operations, and probable hostile resistance influence the composition and strength of forces assigned to the Field Army. If the need arises, the Army Commander requests additional or special means. For example, in a given area, because of terrain conditions and because of the tactical situation, it may be highly desirable to have a larger proportion of armored units; whereas, in another, the Field Army may be composed primarily of infantry division.

The Field Army Commander issues orders to subordinates in furtherance of his plan; allocates divisions, supporting troops, and administrative support to the Corps; makes provision for the organization of any special task forces; and coordinates the efforts of components of the Field Army.

The Field Army Commander is responsible to the next higher command for the tactical and administrative operations of his Army and territorial responsibility for the Army Area. In all situations, he is responsible for the organization and operation of the necessary services for immediate support within the Army. He allocates critical or regulated items and

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announces available supply rates for ammunition to subordinate commands within the Army. The actual administrative support is provided by the Field Army Support Command (FASC).

4. Corps:

The next tactical echelon below the Field Army is still the Corps. The role of the Corps, although narrower in scope, is similar to that of the Army Group. The Corps is organized primarily to executive tactical and strategic combat operations normally as part of the Field Army. (Show Chart No. 2). It consists of a headquarters, corps combat and combat support troops, and a variable number of divisions allocated in accordance with the requirements of the situation. During SAGEBRUSH there will be one Armored and one Infantry Division actually present, with two Infantry Divisions being simulated in the III Corps. The two remaining simulated Corps will each have 1 Armored and 3 Infantry Divisions all simulated. Corps troops will normally consist of a Signal Battalion, Armored Cavalry Regiment, Artillery and Engineer Troops. Detailed study of Corps troops will be made when you are divided into test area groups later on. The composition of the Corps depends upon its mission, the availability of forces, the terrain and weather, and the situation. The flexibility of its organization permits an increase or decrease in its size, or a change in the type of units making up the Corps.

The Corps Commander assigns missions to the division and Corps troops. In battle, he coordinates the action of his divisions, determines the employment of Corps troops, and employs the Corps reserve in accordance with the requirements of the situation.

The Corps Commander is assigned an area by the Field Army Commander. He normally delegates such responsibility to the divisions under his command and does not retain direct control of any area.

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Ordinarily, the Corps does not operate administrative installations. Administrative support of the Corps is provided by the Field Army through the FASC and FASB. However, the Corps Commander normally controls the allocation of replacements to his forces. He may control by recommendation the allocation of any item or service support where such support is required to insure equitable distribution of means to his forces in accordance with the tactical missions assigned to them.

5. The Infantry Division:

Next, merely for review purposes, let us look at the standard Infantry Division before ATFA. I will leave this next chart (Chart No. 3) exposed very briefly before going on to a detailed study of the ATFA Infantry Division. (Expose Chart for about a minute.)

This next chart (Chart No. 4) shows the detailed organization of the ATFA Infantry Division with which we will come into contact during SAGEBRUSH - namely, the 3rd Infantry Division. This Division is called by some as the ATFA-2 Infantry Division inasmuch as it was tested during FOLLOW ME last spring resulting in various changes. Let us look at the major differences between this Infantry Division and the standard Infantry Division. Note that Combat Commands A, B, and C replace the former regimental organization. Each combat command will have a headquarters company containing company headquarters, command and staff section, motor transport section, communication platoon, security platoon, and a mess section.

New units found under Division Headquarters are the Division Aviation Company and the Administrative Services Company. This latter company replaces the functions of the former Division Replacement Company and Division AG.

We now have a Division Signal Battalion instead of a Signal Company, as before. Note that the Division Reconnaissance Company is now a Battalion under ATFA.

[REDACTED]

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Looking at the Infantry Battalions, we see 8 separate Infantry Battalions under ATFA as compared to a total of 9 in the Standard Infantry Division (3 per each of the 3 Infantry Regiments). However, each of the ATFA Infantry Battalions contain 4 Rifle Companies as compared to 3 Rifle Companies in the standard Battalion. This results in 32 Rifle Companies under ATFA as compared to 27 in the Standard Infantry Division - a gain of 5 Rifle Companies in ATFA. In passing, I would like to point out that the 60MM Mortar has been eliminated in the ATFA Infantry Division being replaced by the 81MM Mortar in each Rifle Company. Also the 4.2" Mortar, formerly in each Infantry Regiment, is eliminated in ATFA.

Note that the ATFA Division now contains 2 Medium Tank Battalions of 4 Companies each, which is 2 tank companies more than the 1 Tank Battalion of 3 Companies and 3 separate Tank Companies (in each Regiment) contained in the standard division.

The Engineer strength remains the same, generally.

The big difference in Division Artillery is the Antiaircraft setup. Under ATFA we have an AA Battery in each Field Artillery Battalion as compared to a separate AA Battalion in the standard Infantry Division.

The Division Support Command, under ATFA, is comparable to the old Division Troops setup. The Division Support Commander also performs the duties of Division G4. Transportation and Supply Company may be compared to the old QM Company and Maintenance Battalion may be compared to the old Ordnance Battalion. However, many significant changes have been made in the supply and maintenance setup - now being organized on a functional rather than a branch basis. This applies throughout the ATFA Field Army and will be covered in a later period by Colonel Vandenberg.

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[REDACTED]

So much for the ATFA Infantry Division. Are there any questions before preceding to the Armored Division?

6. The Armored Division:

Next, merely for review purposes, let us look at the standard Armored Division before ATFA. I will leave this chart exposed very briefly before going on to a detailed study of the ATFA Armored Division.

The next chart shows the detailed organization of the ATFA Armored Division with which we will come into contact during SAGEBRUSH - namely, the 1st Armored Division. Just opposite from the Infantry Division, very few major changes have occurred. Generally speaking, these changes are:

The Replacement Company and Division AG has now become the Administrative Services Company.

Division Aviation Company has been added to the ATFA Division.

Signal Company becomes a Signal Battalion.

One additional Tank Company has been added to the Heavy Tank Battalion, which now has 4 companies instead of 3.

Instead of a separate AA Battalion, in ATFA we have an AA Battery in each Field Artillery Battalion.

The new Support Command can be compared to the old Division Trains. As in the Infantry Division, the Support Commander is also Division G4.

Transportation and Supply Battalions can be compared to the old Quartermaster Battalion.

Maintenance Battalion can be compared to the old Ordnance Battalion.

Are there any questions on the ATFA Armored Division?

[REDACTED]

[REDACTED]

7. Summary:

In conclusion, I will summarize the highlights of ATFA organization at the various levels.

ATFA was designed to meet the needs of atomic warfare and still function effectively on the conventional battlefield.

At Field Army Headquarters level, the major change is the Field Army Support Command which unit provided the actual administrative support for the Field Army.

At Corps level, the change is slight with more emphasis being placed on taking Corps entirely out of the logistical field of responsibility.

The standard Infantry Division has undergone numerous changes being organized similar to the Armored Division as the final result.

The Armored Division has undergone only a few major changes.

Are there any questions?

[REDACTED]

NO

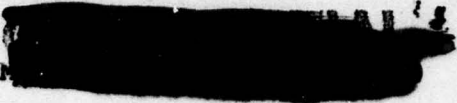
II. Logistics in the ATFA Field Army - Prepared by Col. Vandenberg, AMTEG

At the outset, it is desirable to emphasize certain basic precepts which have guided the development of ATFA from a logistics point of view. The first is the centralization of mess, maintenance, internal supply and personnel administration. The purpose of this was to remove the burden from the lower unit commander, the company commander, the fighting commander. In accomplishing this, all company organizations of the division were grouped into battalions. The centralized 2d echelon support for the battalion was performed by the battalion headquarters and service company. As a result of test in Exercise BLUE BOLT and FOLLOW ME, it became evident that dispersion of units, modes of operation and several other variable factors, precluded this centralization from being carried out efficiently in all instances. In the division proposed for test in Exercise SAGEBRUSH, some companies have been broken out again as separate companies and simultaneously mess and maintenance have been decentralized within some of the remaining battalions.

The second precept was the functionalization of service support. This affected chiefly the fields of supply and maintenance. Again the lower echelon units would have to go only to one place for supply and one place for maintenance.

Another aim was the removal of logistic worries from the commander. The support command established. This was done for two reasons. One was to reduce the size of the division headquarters and the activity in and around that installation, thereby reducing its profitability as a target to the enemy. The other reason was to relieve the commander of logistic worries and allow him to concentrate his attention of tactical operations.


With these facts in mind then, let's briefly review the logistical organization of the Infantry division. The Support Command commander is also the Division Logistics Officer. He has under him all the elements of the division



which provides 3d echelon logistic support. Commanders of these units, in addition to their command responsibilities, act in the capacity of Special Staff Officers of the Support Command commander. The Band is located in the Support Command to allow maximum utilization of personnel for such jobs as supply handlers, litter bearers, prisoner of war guards and security troops. The Military Police Company is located in this command chiefly because of its traffic control responsibility. The Medical Company provides the 3d echelon medical service for the Division including evacuation, limited holding, medical supply and maintenance. The Transportation and Supply Company provides pooled transportation and provides supply of all classes except medical, aircraft and a new class of supply called Class VI. This company also provides graves registration service to the Division. The Maintenance Battalion of the Division provides 3d echelon maintenance for all equipment within the division except medical and aircraft. It is organized to permit provision of 3d echelon maintenance elements right down to the combat command and, when the tactical situation permits, even further forward. It provides another element which operates from a more fixed installation in the rear of the division area. This Maintenance Battalion is also responsible for the supply of Class VI to the Division.

This organization was devised to place responsibility for logistic support for the Division on one individual and to provide one source of supply and maintenance.

In the Armored Division the logistical organization is identical to that of the Infantry Division except the Medical Company has some different equipment to permit it to function under the concepts of armor employment; the Transportation and Supply Company becomes a battalion; the Military Police is slightly increased; and the Maintenance Battalion is slightly enlarged. The increased requirements for maintenance, POL, ammunition and transportation are the reasons for the difference.



[REDACTED]

Although the Corps is not a logistic echelon, it is essential for continuity purposes to mention it here. In current doctrine, the Corps is strictly tactical; but, because of the area of responsibility assigned, it cannot help but get into administration. As you know, once the divisions are given their zones of responsibility, there is a big chunk left over called the Corps Rear Area. In ATFA, the Corps rear boundary and the division rear boundary are one and the same. The Corps is assigned only that area necessary for its committed divisions. This does not preclude the Corps commander from locating units and installations (or from making tactical movements) in this area which does not belong to him.

This concept permits the streamlining of Corps Headquarters. The technical staff and administrative staff have been eliminated as special staff sections, and representatives of the supply, transportation, and maintenance have been placed in the G4 section. As in the divisions, the Chemical Officer, under the ATFA concept, retains only tactical functions and is located in the G3 section. There does remain in the division, Corps and Army, a Signal and an Engineer Special Staff Section but solely for the operational or combat support functions. Their logistical responsibilities have been placed in the Support Command.

The Corps, under this concept, has no excuse for getting into anything but tactics. There is an Aviation Company. The Chemical Smoke Generator Company is one company out of a battalion provided in the Field Army. Normally, one company is attached to each Corps and one is retained under Army control. There is a Communication Reconnaissance Battalion. A Signal Battalion is provided for operations only. There is an Armored Cavalry Regiment, Engineer Combat Groups and Corps Artillery. A type Corps has 2 Armored and 3 Infantry Divisions.

[REDACTED]

[REDACTED]

Currently, the Field Army is tremendously tied down by a lot of separate companies under its direct command. Even if these companies are assigned or attached to groups, it still means 35 to 40 separate elements, logistical and administrative, under the direct command of the Army commander. ATFA attempted to solve this problem by decentralizing. The Field Army Support Command has been assigned logistical and administrative units to provide service support. This means that the Field Army commander has under his command only the Field Army Support Command for logistics, the three (3) Corps, and certain combat and combat support troops which are four types: aviation, artillery, engineer and signal.

Unlike the division organization, where the Support Command commander accomplishes the functions of G4, the Field Army Support Command commander is not the G4 of the Army. There remains a G4 on the Army staff. His job is slightly changed, however. Instead of looking over his shoulder to supervise administrative operations, he now is solely concerned with coordinating the administrative plan with the tactical plan.

This organization, like the Corps organization, has allowed a streamlining of the Army headquarters. No technical service special staff, (except for Engineer and Signal, and, at Army level, Chemical which are present solely for the combat support role). It is intended that the Army headquarters will be much more mobile, much less tied down and better able to respond quickly to tactical requirements.

The Field Army Support Command has the mission of providing logistical and administrative support for the Army. This includes reinforcing 3d echelon support for the divisions, 3d echelon support for the non-divisional units of the Field Army, and 4th echelon support for the entire Field Army. There is the Commanding General; the Deputy Commanding General and the Chief of Staff, G1, G2. The G3 and G4 have been combined. G3 is an operations staff officer; the G4 is a logistics staff officer; but the operations of the Field Army Support

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Command are primarily logistic in nature, so the G3 and G4 are combined. The special staff is shown on this top line of the chart. It is the functional special staff. The Surgeon represents the Medical Service which provides typical medical service to include medical supply and medical maintenance. The medics have retained supply and maintenance because the amount of equipment involved is very small as far as maintenance is concerned and the supply aspects require highly skilled technicians and handlers of whole blood, pharmaceuticals and things of that nature. In addition, these items are used only by the Medical Service. The construction special staff officer represents the Construction Service which is responsible for all construction in the Army Service area except for the communications. It also handles Class IV fortification, construction and camouflage material. The Supply Service is responsible for all classes of supply in the Field Army except for some engineer supplies, medical and Class VI supplies. The communication special staff officer represents the Communication Service which provides communication construction to support the communication network in the Field Army. The Maintenance Service provides maintenance for everything in the Field Army (except medical) and also provides the parts supply or Class VI. The Provost Marshal represents the Military Police Service. The transportation staff officer represents the Transportation Service which provides highway and helicopter transportation for the Field Army.

It is emphasized that these special staff officers have no command jurisdiction over the elements of their respective services. Command is through the major subordinate operating elements which are the field Army Support Brigade and the Headquarters Battalion of the Field Army Support Command.

The FASC Headquarters Battalion commands units necessary for the operation of the headquarters and other elements which, within themselves, provide a single service to the Army. The Signal Operation Company provides communications for the Support Command headquarters. The Transportation Company provides the staff

[REDACTED]

transportation which is not organic to the headquarters and Service Company. The Burial and Graves Registration Company operates the Army cemetery. It does the job for the whole Field Army. Machine Records Center provides machine records service for the entire Field Army. The Supply Control Det., not stock control, provides control for those regulated items or other items of supply which become critical or sensitive from time to time. There is one other element not shown on here and that is a Mobile Petroleum Products Laboratory which provides analytical service of POL for the Field Army.

The Field Army Support Brigade provides the logistics support of 3d and 4th echelon for a Corps and for the other units in its area of responsibility. The area of the FASB coincides in the forward portion with that of the Corps and extends to the full depth of the Army zone of operations. In addition to logistics responsibilities, FASB has the responsibility for Area Damage Control and Rear Area Defense in this area.

This precludes the Army commander from looking about and finding some Engineer Group Commander, Medical Group Commander or aircraft group Commander to take those jobs on, particularly Rear Area Defense, in addition to their basic missions. The FASB headquarters was tailored to accomplish this.

The Brigade Headquarters itself is somewhat similar to the Support Command in that it has a G1, G2 and a combined G3 and G4. It has an organic administrative staff consisting of AG, Finance, Chaplain, IG and Civil Affairs/Military Government.

The remainder of the special staff of FASB are not organic to the Headquarters but command the units subordinate to the FASB, which are the Supply Service Group, Maintenance Service Group, Medical Service Group, Transportation Service Group, Construction Service Group, Communications Battalion, Military Police Battalion and Administrative Service Battalion. The reason these last three are battalions and the others are groups is because of the magnitude of operations.

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It is to be noted that the composition of these units is not fixed. Each Group may have from 3 to 8 battalions attached to it. Each battalion may have from 3 to 8 companies. They are attached--they are not organic. The reasons for this is to allow for maximum flexibility. For example; this Brigade, and its groups may be constituted a certain way to support a Corps of 3 Infantry and 2 Armored divisions. If the tactical plans require a change in Corps composition to 4 Armored divisions and 1 Infantry division, then the composition of the Brigade can be modified or changed, particularly in the fields of Supply, Maintenance, Transportation and Medical support to meet the requirements of that new Corps. It is intended to be completely flexible.

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Appendix C

FACTORS ADVERSELY AFFECTING TESTS

prepared by

Col. Herbert G. Sparrow, AMTEG

1. General

a. As foreseen during test planning (Appendix 1 to Annex A of Detailed Plan of Army Tests), many factors other than organization and doctrine affected maneuver performance during Exercise SAGEBRUSH. In some instances, these factors affected performance enough to preclude the desired tests, or to prevent the attainment of conclusions based upon what actually occurred. Their net effect was to place a greater demand upon the judgment of the Evaluator, and to necessitate greater reliance upon opinion (as opposed to factual evidence) than was originally contemplated. Notwithstanding these factors, however, effective tests were attained in most areas.

b. The principal "contaminating factors" on Exercise SAGEBRUSH were:

- (1) The usual unrealistic aspects common to all maneuvers.
- (2) Inadequate knowledge, training and experience of participants.
- (3) Umpiring and maneuver control.
- (4) Strength and composition of forces.
- (5) Logistic limitations.
- (6) Terrain.
- (7) Weather.
- (8) Duration of maneuver.
- (9) Air Force Maneuver Play.

c. Factors affecting only one test area are not included here, but are discussed in the applicable report.

[REDACTED]

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[REDACTED]

d. Some of the "contaminating factors" such as geography, weather, and the fact that there was no actual combat, must be accepted as unavoidable in maneuvers. The adverse effects of others, such as inadequate training, might in future tests be greatly reduced or eliminated by appropriate action. This subject is covered in Conclusions and Recommendations appearing at the end of this ANNEX.

2. Unrealistic Aspects of Maneuver

a. The principal factor affecting validity of tests of combat operations and doctrine in any maneuver is the absence of many basic realities of battle; live ammunition, actual wounds and death, real atomic explosions, etc.

b. The emotional stress and psychological reactions associated with actual combat were absent, limiting test and training experience particularly in the following fields:

- (1) Reactions resulting from use of atomic weapons.
- (2) Reactions resulting from use of CBR.
- (3) Reactions resulting from the fire of artillery, mortars and other conventional weapons.
- (4) Panic among civilians or undisciplined troops.
- (5) Straggling, desertion, refugees.

c. The impracticability of adequate umpire control enabled aircraft pilots (both Air Force and Army) to take unrealistic risks without being assessed casualties.

d. Casualties, both wounded and dead, ignored their disability and remained in action.

e. Activities and materiel in areas of simulated atomic bursts remained either totally or partially unaffected, to the detriment alike of tests and training.

f. Some lack of realism resulted from the fact that the Aggressor forces used United States Army organization and doctrine instead of some other.

[REDACTED]

[REDACTED]

g. There was no language barrier, either with civilians or enemy personnel.

h. Civilian traffic continued through the combat areas. Control and evacuation of civilians could only be simulated.

i. Numerous administrative unrealities existed:

(1) Large numbers of umpires, evaluators, observers and VIPs required attention.

(2) There were dual administrative responsibilities: To SAGEBRUSH commanders for temporary (ATFA structure) requirements and reports; and to home station commanders, for permanent (conventional structure) requirements and reports.

(3) During the combat phases, extensive plans and actions were required to meet post-maneuver problems (return to home station, or as in case of 1st Armored Division, change of station).

j. Advance knowledge of the general plan of the maneuver, including types of action by phase, duration, and geographic restrictions, led to planning for scenario action rather than for all alternatives.

3. Inadequate Knowledge, Training and Experience of Participants

a. Key officers in many echelons did not have adequate prior experience in comparable headquarters and duty assignments. Some of these officers would have been hard pressed to perform their duties adequately under conventional concepts of organization and doctrine, much less with experimental proposed variations.

b. Newly organized provisional headquarters and units had insufficient "shake-down" training.

(1) There was insufficient time for commanders' personalities and policies to be felt, understood by their staffs, and promulgated to their commands.

(2) In many instances there was a lack of unit SOPs upon which to base routine actions.

(3) The late arrival and assembly of personnel and the late receipt of new

[REDACTED]

[REDACTED]
[REDACTED]

and unfamiliar equipment (notably signal equipment) limited pre-maneuver training.

(4) The CPX which preceded the maneuver failed to provide adequate play for participating headquarters. Consequently the CPX furnished inadequate orientation for participants, umpires and maneuver director headquarters. As a result, the learning factor was a greater detriment to operations in Phase III than anticipated.

c. Levels of proficiency in basic specialities were low, especially in the case of enlisted fillers.

d. There was generally insufficient knowledge of and training in the ATFA concepts of organization and doctrine, by umpires, subordinate commanders, staff officers at all levels, and in most non-divisional units of the Ninth Field Army.

e. Some operational orders, plans, administrative orders and directives were not in consonance with ATFA concepts.

f. Most participants appeared to feel that unit commanders and units were being tested on a performance basis. They did not appear to understand that a concept (under consideration by CONARC) was being tested.

g. The manner in which personnel actually applied their knowledge of ATFA was affected, in varying degrees, by pride, prejudice, personalities, and resistance to the proposed doctrine.

h. Standards of discipline in the field generally were not high. This was demonstrated by instances ranging from failure to carry out instructions to poor march discipline and march technique.

i. There was insufficient understanding by participants, umpires, and MDH personnel, of requirements for tests and evaluation.

4. Umpiring and Maneuver Control

a. The presence of umpires in large numbers is itself a departure from the

[REDACTED]
[REDACTED]

[REDACTED]

realities of combat.

b. The concept of SAGEBRUSH as a relatively "free maneuver" handicapped the conduct of tests, since reliance had to be placed upon test situations developing naturally. Where such situations did not develop it became necessary to "force" them by specific action, or to forego the test. Extensive and intelligent umpire participation was therefore vital to effective conduct of many tests.

c. There was inadequate knowledge on the part of umpire personnel in two vital areas:

- (1) The ATFA-1 Field Army concept of organization and doctrine.
- (2) Plans and requirements for test and evaluation.

Time available did not permit umpire personnel to be sufficiently instructed and oriented in these areas to assure best results in tests and related training.

d. Many umpires, especially at small unit level, had relatively limited military experience and knowledge. This reduced the reliability of information obtained from them.

e. During Phase III Umpire assessments of personnel casualties and of damage to materiel, supplies, and equipment resulting from enemy action was often inadequate, especially in the following areas:

- (1) Atomic strikes.
- (2) CBR play.
- (3) Air and antiaircraft operations.
- (4) Damage to communications facilities.

f. Efforts by units to play maneuver tactics, rather than accept realistic assessment of casualties and damage, handicapped control by umpires and in most cases resulting in failure to provide a realistic situation for the test.

[REDACTED]

[REDACTED]

[REDACTED]

g. Inadequacy of umpire communications, mainly during Phase III, impeded the transmission of information and instructions, and adversely affected the conduct of tests.

h. Unrealistic Control.

During the latter part of Phase III, Maneuver Director Headquarters injected into the maneuver orders for Ninth Field Army to withdraw across the Red River. This action was designed to force participating troops into more rapid action in order to complete the operations scheduled for that phase. Due to breakdown in communications, a delay of about 12 hours occurred which forced MDH into hasty orders. This led to incomplete coordination between MDH and the Umpire Group and misunderstanding by participating commanders which developed a series of unrealistic conditions. As a result evaluation of the adequacy of the ATFA concept during the withdrawal across the river was handicapped considerably.

5. Strength and Composition of Forces

a. Opposing forces were too nearly balanced in strength to provide realistic tactical situations in the defense, retrograde, river crossing and offense in a free maneuver.

b. The Ninth Field Army represented only a small portion of the typical ATFA-1 Field Army.

(1) The Army Headquarters was at about 45% of (ATFA) TOE strength. Hq FASCO, and Hq FASB were also considerably under strength.

(2) Only one of three Corps Headquarters, and only one of three Field Army Support Brigades, were present.

(3) III Corps had only one of three infantry divisions, one of two armored divisions, and approximately 14% of its authorized artillery.

[REDACTED]

(4) There were extensive shortages of Corps and Army combat and service support units. Many of the units present were below prescribed maneuver strength, which was a reduced ATFA TOE strength (designed to provide an austere minimum.)

(5) In some units, up to 50% of personnel present were on TDY status.

c. The effect of the physical presence of only a part of the ATFA-1 Field Army was a major factor adversely affecting test operations:

(1) Officers in higher headquarters tended to visualize the organization for combat as essentially a tower, rather than a pyramid ("One Field Army/FASCOM over one Corps/FASB"; and, since frequently only one Division was on the line of contact, often "...over one Division"), such thinking was shown by an initial failure to play simulated and paper (skeleton headquarters) units and in other ways

(a) Some higher staff officers, not wishing to interfere with the prerogatives of subordinate commanders, virtually refrained from play.

(b) Other higher staff officers, wishing to correct or influence the action of operating units, tended either to circumvent or unduly to harass the intervening subordinate headquarters.

(2) There were insufficient resources to provide alternate means or replacement units for elements decimated by mass destruction weapons.

(3) There was inadequate play for test purposes in many areas, including Artillery, Army Aviation, and Combat Engineers.

6. Logistics: Equipment and Supplies

a. There were numerous shortages of both major and minor items.

b. Limitations and delay in availability of fortification materials prevented complete emplacement of obstacles planned for the outset of Phase III.

c. Lack of adequate communications equipment, together with the shortage of trained communications personnel, hampered many operations which otherwise might have provided useful test information (for example, fire support operations).

[REDACTED]

d. Levels of replacement and spare parts varied from overstockage in a few units (whose commanders were determined not to be "caught short") to shortages in basic loads of some support units.

e. Misunderstanding of authorized modifications in formal property accountability interfered with realistic supply play.

f. There was a lack of supply play at higher levels (in AMSCOM, functioning as TASCOC), except for actual daily issues (Class I and III) and very limited play of Class II and IV supply. Play of clothing and footwear, which both in numbers and in volume would be a significant factor during a campaign, did not occur.

g. Partly as a result of inadequate assessment by umpires, and partly in consequence of failure of unit commanders to play the game by the rules (which they did not always understand), the play of casualties, POWs and replacement of equipment and supplies was entirely insufficient. Therefore, the load desired for test and training purposes was not placed upon the supporting technical and administrative services of the Field Army.

7. Terrain

a. Monotony and lack of variation of the terrain; low, flat, swampy ground, frequently punctuated with bayous; absence of hill masses and terrestrial observation; limited metaled road net and numerous bridges -- all these differ from the "typical" environment desirable for test of the ATFA-1 Field Army.

b. An additional "contaminating" factor was the administrative restriction arising from numerous and extensive "Off Limits" areas, which combined with road and bridge limitations to hamper free maneuver and to canalize action. Bridge sites at the Red River and drop zones, for example, were determined largely by the availability of real estate. This permitted the opposing force to have knowledge of sites of probably action.

8. Weather

a. Weather during the maneuver was generally moderate, though at times

[REDACTED]

[REDACTED]

uncomfortably chilly. During Phase V, rainy weather affected test operations in two respects:

(1) It limited tactical air (including airborne) operations.

(2) It adversely affected smoking of bridge sites and bridges across the Red River.

b. In both of the above instances, the adverse effect of weather upon the conduct of tests was accentuated by the brevity of the tactical phases.

9. Duration of Maneuver

a. A longer maneuver would have resulted in improved conditions for many test areas. (A tactical test may often be accomplished in a matter of hours; a logistical test may require days or even weeks, to produce measurable effects.)

b. The limited time available for actual maneuver forced Maneuver Director Headquarters to inject certain unrealistic situations in order to hasten certain actions and carry out the balance of the maneuver as scheduled.

10. Air Force Play

The manner in which the maneuver air war was played resulted in no Air Force close support for US forces in Phase III and little in Phase V. This limited the opportunity to play close air support and provided little opportunity to make a complete evaluation of close air support employing either atomic or conventional weapons. It also limited the evaluation of the adequacy of the proposed organization and doctrine to operate under conditions of hostile local air superiority.

11. Conclusions and Recommendations

Testing experience on Exercise SAGEBRUSH indicates the following ways in which better results may be attained in future:

a. Designation of individuals and units (and particularly selection of officers for key assignments in provisional headquarters, in the umpire organization, and in test groups) should be on a "best qualified" basis.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. More time should be allowed for pre-maneuver preparations, to permit training, orientation and close coordination of all personnel concerned (Maneuver Director Headquarters, Umpire Group, Test Group and Participants) in the following subjects:

(1) Specific concepts of organization, doctrine, procedures, or equipment to be tested.

(2) Plans for test and evaluation, including their respective participation in such activities.

c. Troops should not be committed to a maneuver designed to test a new concept until the concept has been translated in detail from overall broad doctrine into operation policies and procedures. This will insure that operations will in fact reflect the new concept, and that the training received by the participants is in consonance with the tested concept.

d. Improved methods should be evolved for:

(1) Assessment of casualties and damage resulting from use of weapons (Atomic or CBR).

(2) Playing the reaction to the foregoing, including area damage control, medical evacuation and logistic actions.

(3) Controlling or penalizing (possibly by casualty/damage assessment) unrealistic action by participants, notably by pilots of aircraft.

e. The tested element (in SAGEBRUSH, this was the Ninth Field Provisional) should be as complete as possible.

f. At least one pre-maneuver CPX should be held, designed to require intensive participation by all concerned and to insure the operational readiness of communications, including umpire communications.

g. In determining the degree of "free maneuver" to be attempted, consider-

[REDACTED]

[REDACTED]

ation must be given to test requirements. (In some instances, it is preferable to build the maneuver scenario around the required test situations.)

h. In cases where sufficient "live" troops cannot be provided and it is necessary to play simulated and paper units, then they should be played from the outset with imagination and enthusiasm.

i. Numbers of observers, evaluators, and "VIPs", physically present with a unit at any one time, and resultant administrative burdens upon player units, should be held to a minimum.

j. Effort should be made to reduce the number and extent of "Off Limits" areas, and also to influence the action so as to utilize available maneuver areas to the fullest possible extent.

k. The Air Force battle for air superiority should be initiated early enough to permit tests and training in joint operations during the tactical phases of the Army action.

l. Consideration should be given to the desirability of a longer maneuver, or of longer tactical phases, especially when extensive logistic tests are to be conducted. Logistical tests must include complete play of procedures involving supply, maintenance, evacuation and replacement of both equipment and personnel.

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Appendix D

LESSON PLAN FOR EVALUATOR INSTRUCTION

Prepared by Dr. Shriver, AMTEG

Purpose:

The purpose of this discussion is to define the way in which you will collect data during Operation SAGEBRUSH.

The term "evaluator" has been used by AMTEG as a label for one of the data collecting devices designed to fit the test conditions of this maneuver. The term is not completely characteristic of the process it represents. This is because a data collecting process will be used in SAGEBRUSH that has not been used in previous maneuvers, although "evaluators" have been. It has been convenient to use the old name for the new process, but don't take the name too literally.

Definition of Job:

One way of defining the evaluator's job is to describe two data collection processes which the "evaluation" process is not. These other two devices are the ones that you might expect your job to be, but which will actually be accomplished by less experienced personnel.

One process to be used in SAGEBRUSH is the description of simple events. The data obtained by this process are called factual. They are concerned with times, meter readings, tallies, etc. These "facts" are highly objective and open to the observations of anyone. Questions such as the following are directed toward obtaining such data.

During the same 24-hour period, what was the total number of casualties that required evacuation from the division clearing station?

What was the average length of time it took to admit a patient?

What was the average time and distance that the patients were transported from Field Hospitals to Holding Stations? Time _____ Distance _____

As you can see, no special skill or broad background is needed to answer these questions.

A second process to be used in the test is one of evaluating the performance of men and systems by comparison to "typical" combat performances. This is still not your job, at least it is not all of your job. You will not answer questions solely in terms of performances you observe.

Your job involves a third process, one of going behind the performances to determine their cause.

After you have made a comparison of the maneuver performances to performances you have seen under similar circumstance in battle, you are to make additional judgment of "why" the performances were as they were. "Was the performance poor because of low proficiency or was it because of inadequacies in the ATFA doctrine," is the type of question you must always answer. There are factors other than proficiency that can affect performance. You can find a list of them in Appendix 1 to Annex A of the Detailed Plan of Test. They are listed as undesirable testing conditions. It is your job to make the judgment of how important they were in producing the performances you observed. After making that judgment, you will answer the question of how adequate was the ATFA organization and doctrine, involved in the performance itself. Do not slip into thinking that the "adequacy" refers to the performance; it refers to the doctrine and organization behind the performance. This is an easy slip to make because most questions will make sense if answered in terms of performance only. It may seem logical to you to answer in terms of performance only, but that is not your job. There are other

data collection devices which will obtain data on performance, it is your job to go behind the performance and judge "why" it was as it was.

In the "factual supporting evidence" space of your format you will describe performances. In this space you will describe the aspects of the performance which led you to answer the "why" question the way you did. The performance you will describe here may go beyond that asked in the question. You may have to describe the performance of cooperating units or sub-units as well as the one indicated by the question in order to support your judgment of "why" the performance occurred as it did. You may, for instance, have to describe the unskilled behavior of certain men in answering a question on the production of a certain unit. In such a case you might make the judgment that the doctrine involved in this unit production was adequate even though the production was not up to a standard because of the low proficiency of certain men. In this case your recommendation would probably be "more training for the men" or something to that effect. There is no need to elaborate on that particular recommendation. The "recommendation" space was included in the format primarily to obtain information on which to base changes in the ATFA organization and doctrine. In cases where the doctrine or organization are inadequate a longer recommendation would be in order.

One point should be emphasized with reference to "factual supporting evidence". Entries within this space should always be made, and in terms of specific performances which you have seen. Sometimes your question will be phrased in general terms but you are still to answer it on the basis of what you have actually observed in this maneuver. A question might be phrased "did the maintenance unit have enough money wrenches." Don't answer such a question as only adequate or inadequate. Select a specific

instance in which there was a lack of monkey wrenches and enter a description of that event and the conditions in the factual supporting evidence space. Treat the question as if it had asked "were there any occasions on which the lack of monkey wrenches hampered the maintenance unit."

(Cite a few examples here)

Now let's return to the overall testing picture. The techniques for data collecting instruments being used in the SAGEBRUSH test have been described. The first was a descriptive process where the reading on a meter of some kind is recorded; the second was an evaluative process where performance was rated with respect to the previous experience of the observer; the third, your job, was an interpretive process where you make a judgment as to the cause of the performance. So, even though you are called "evaluators" your job involves something more than evaluating performance.

You might note that the data obtained by the descriptive and the evaluative process are both called "factual." However, it is easy to see that the data obtained from meter readings is "more" factual (or reliable) than that obtained from judgments that involve previous experiences. It might be noted that the three processes fall at three points on a scale of objectivity with your job the farthest removed from "facts." You might ask why factual, objective evidence is not the only data used in this test. Under the present test conditions factual evidence does not answer the question that is supposed to be answered in the maneuver. The mission question is, "Is the ATFA doctrine and organization adequate?" No amount of data on performance and outputs of various systems can answer this question as long as the factors of proficiency, unbalanced ratios, etc., are allowed to vary in an uncontrolled manner during the maneuver. These other

factors affect performance just as much as organization and doctrine. The only way to evaluate organization and doctrine is to have an instrument for distinguishing between those factors and the other "contaminating" factors. Needless to say, such instruments are not in abundant supply. The point is that factual information on performance alone cannot answer the question of doctrinal adequacy under the present test conditions. That is why some instruments for distinguishing between the various causal factors was needed in the SAGEBRUSH test. Since the data obtained by such an instrument would not be highly objective and would hence be intrinsically unreliable, it was mandatory to obtain highly experienced officers who could make the judgments as accurately as possible.

This brings us back to where we started. You are the experienced officers who will make judgments which distinguish the various causes of performance from one another. You will be the only instruments for obtaining a particular kind of maneuver data which is needed to answer the question of the adequacy of the ATFA organization and doctrine.

Discussion:

We will take up some sample questions next, but before doing that let's discuss the material just presented. - classroom discussion

Note: Bring up following points in discussion.

1. If the events referred to in questions do not occur, you are not to attempt to answer those questions.

2. If the mission given by a Commander is not realistic, do not use this as a basis for answering a question. Try to find another example.

If it is impossible to obtain another instance, report the first with a special note, indicating the manner in which the mission was unrealistic.

This procedure is to be followed only if the error is on the part of the commander involved, not in the event that the ATFA doctrine necessitates the particular mission.

3. Try to learn your questions well enough that when you see an event in the maneuver, you will recognize it as one referred to in a question.

4. If the question is not specific enough to be answered by citing an incident, it is up to you to "break" it into component questions. Such a question as "Was the staff planning adequate?" is not specific. However, each of you know what the constitution of staff planning is in your own area. Investigate those functions and cite specific instances where the particular functions were or were not accomplished properly. In writing your answer treat these different functions as separate questions.

5. There may be some few questions which cannot be "broken" into component functions. Before you give up a question as one of this type, talk it over with your senior evaluator.

6. Be careful that the incidents you report reflect the proper balance between good and bad on each question. In other words, don't record an ineffective incident just because it was dramatic while failing to report effective incidents that occurred but which were less dramatic. Don't remember the good or the bad with a bias.

7. Be sure to elaborate on the conditions under which a success or failure occurs. This is very important.

8. If you can obtain several instances on one question, include each one in the factual supporting evidence column, including the conditions under which it occurred. Whether you consider this as one answer or several answers to the question is immaterial. The important thing is to record

full details on each occurrence - - as if you were answering separate questions.

9. It is most important to obtain measurements on units and systems when there is a strain on them. If they can function under heavy loads this is important - - as is the fact that they begin to fail under stress. Note the conditions which produced the stress in the factual evidence space, with the object of conveying an index of the amount of stress.

One more point before we finish this subject is this: In a few instances you will be asked to answer whether the objective meter readings type or the "performance only" type factual questions to answer. This will happen in instances where the senior evaluator has felt that you would be in a better position than anyone else to do this. This type of question will be infrequent and the senior evaluator in your area will make a special note of any such questions that have been allotted to you.

Evaluator Coordination:

Another aspect of your job is "on the spot" coordination of information. This coordination must be done "on the spot" in the field rather than in the office after the information is collected. The reason for this is that the information will not be collected if the coordination takes place too late. Let's take an example:

Suppose you are observing an operation primarily involving a Transportation Unit. The output is not adequate because too many trucks are "deadlined." This performance answers one of your questions but much more information can be obtained if the evaluator of the Maintenance System knows that the output of the system involving that unit is not adequate. His best indication of the adequacy of the Maintenance System's output is from the evaluator associated with the "consumer" of that output. If the coordination of informing the "producer" evaluator is executed "on the spot" an

additional evaluation can be made which would otherwise be lost. This information in the Maintenance system would not have been obtained if the coordination had been done too late. The Maintenance Evaluator could not accurately reconstruct the situation which caused the inadequate output if he had not found immediately that the output was inadequate.

This example depicts only two links of a chain, the Transportation and Maintenance links. There may be no other links or there might be several. It is important to trace all the links. In the example, if the Maintenance unit is at fault the chain stops there. But there is also the possibility that the Maintenance unit didn't receive parts from Supply. In this case, the Maintenance unit is a Consumer, the Evaluator should check with the producer Evaluator at Supply. The fault may be found in the Supply System or the chain may go on - or even back to Transportation. The important point is that this chain cannot be identified long after the performances have occurred. If the evaluator coordination does not occur "on the spot" all the chain of events is lost - - or at least, distorted by memory in an attempted reconstruction. This type of on the spot coordination is one of your important functions. Again you are the only source of such information and you must take great pains to carry out the function promptly and completely. You will use the umpire communication network to accomplish the task.

The example described a situation where the Coordination had to be made between systems. Of course the same kind of coordination must take place within a system, between its units. In some cases you will coordinate with other evaluators in your system. In other cases you might have to "coordinate with yourself" by going to other units within a system to check

on their output yourself. Once again we have come to an instance where your "name tag" may not completely represent your job. That is, you may be called the "MI Company Evaluator" but you will have to obtain or give information to the MI Battalion or Air Reconnaissance Support Evaluators in your own system on numerous occasions. Don't make a report on only the unit or system that bears the same name as yours. Relate the report by inputs to and outputs from other units and systems. Your reports of these interrelations will go in the "Factual Supporting Evidence" space. We'll take up this subject again in a minute when discussing the Factual Supporting Evidence. But remember, your unit or system is not operating in a vacuum. It is both a producer and a consumer, it functionally interrelates with other units and systems, and we want to measure those interrelations. Let's look at a picture on this situation -- View Graph -. If we are going to measure these interrelations we have to report on them. So don't identify with your unit or system to the extent that you report on it as if it were the only one operating during the maneuver.

There is one caution which must be observed. It hinges on the point that you cannot become part of the system you are evaluating. This means that you must be careful not to let your observations of adequacy or inadequacy be known to any participant, unit commanders or others. Their actions would be quite different if they knew your evaluation. Knowing their adequacy or inadequacy would be artificial with respect to the situation in which the ATFA system would ordinarily function - i.e., without "outside" "standards" of performance, such as evaluators. So be careful when making reports back and forth among evaluators that no participants obtain the information.

Answering Participants Questions Regarding ATFA Doctrine

This subject brings up another related question. During the "FOLLOW ME" exercise, evaluators were questioned by participants regarding certain aspects of ATFA doctrine. This action posed a methodological question. Should the evaluator enter into the situation by giving this information or not. There is every reason to believe that evaluators will be asked the same kind of questions, during SAGEBRUSH so the question of "What to do" is still pertinent. The answer is this: since it is desired to have proficiency as near "typical" as possible, such information should be given by evaluators. But you must do no more than an umpire, who would repeat the rules of a ball game, but not show players how to implement them. The units in this maneuver are playing under ATFA rules. Unfortunately the players don't know all the rules of the game, so you, who do know the rules, should make them available. These descriptions of ATFA doctrine took a considerable portion of the evaluators' time during "FOLLOW ME". Naturally you must not get sidetracked from your evaluation mission, but when possible, don't be reluctant to read the "rules" for the players. In some cases it may even be necessary for you to take the initiative in this. Remember if ATFA doctrine is not used it cannot be tested. Again, however, you should limit yourself to repeating the rules. Do not advise players as to how they should be implemented.

Factual Supporting Evidence

The subject of what constitutes factual supporting evidence was not taken up in detail in the description of your job. It merits further definition. The evidence you enter in this space should be factual in the sense that it is open to the observation of anyone. You should describe the aspects of the situation on which you are basing your judgment. This means that in order to answer a question you will have to watch performances

indicated by the question and describe the pertinent aspects. This description should back up your opinion of why the performance was as it was. Perhaps you will find a system failing in its output because it did not have ATFA equipment. Don't merely say that there was "insufficient equipment" as factual evidence of your judgment. Describe the way in which insufficient equipment hampered the output. For instance, the entry in the factual evidence space might read. "there are five men available to serve ten trucks, but only two of them could work because there were only two sets of equipment. The ATFA organization authorized five sets of equipment but this unit was not issued the proper number". You may be thinking that all those words could be summarized by "insufficient equipment". However, the words "insufficient equipment" might also be used to summarize the following case.

Two men were observed working on ten trucks. When asked, they said they only had two sets of equipment. The fact may have been that there were no more men available to work even if they had had more equipment. This is quite a different situation, it indicates a possible inadequacy in ATFA organization though it might have been summarized as "insufficient equipment". Place yourself in the position of a man who has to make a decision, without having seen the action himself. If he sees a description such as the first one, which eliminates the possibility that there were not enough men to do the job, he can place more confidence in the answer. Multiply this one action by the thousands that will be reported to see how confidence can be built up by descriptions which eliminate alternative interpretations. Don't forget that one type of alternative interpretation can be eliminated by citing an interrelation with another unit or system. If by coordination you

have found that the inadequate output of a transportation unit was caused by an inadequate input from the maintenance system put that information in the factual supporting evidence space. The same type of entry should be made by the Maintenance Evaluator along with the results of any coordination he made with other systems. This type of information belongs in the "Factual Supporting Evidence" space along with other descriptions of events.

The point is not that answers should be long for longness' sake but that they must include enough description to eliminate alternative interpretations. Think to yourself what other causes for the conclusion you reach might be made then record the objective evidence that negates them and has led you to your conclusion. In other words, you made your judgment after considering various aspects of the situation, you may have done this implicitly, if so you must force yourself to review the situation in your mind until you can state the critical feature of the situation explicitly - then write them down. The aspects which caused you to reject certain causes will generally be the ones that are most important to describe. As in the example it was important to report that there were sufficient men available as well as that there was not enough equipment. Your skill in making these things explicit will contribute greatly to the reliability of the test. The description may take the form of numbers, performance, or things we haven't even thought of yet. The important thing to remember is that you should describe all things that led you to your conclusion.

Objectivity

It goes without saying that no predetermined positions should be staked out by the Evaluators on the correctness or incorrectness of the ATFA concepts. The task of doing an objective reporting job will be quite difficult enough without an evaluators' bias showing through the data. It also seems that if

there is evidence of some bias the entire test will become suspect. Since objective evidence is not sufficient for answering the question on ATFA doctrine and organization, we have been forced to introduce "evaluative" processes. If there is evidence of bias on any part of the "evaluative" process there will be no one who can separate the "true" from the "not true". The entire test will lose its value. I think the point is that, as with pregnancy, there can be no degree. The integrity of the evaluator group is one of the major factors in the validity of the test.

You have a set of instructions for answering "evaluative" type questions on your desks. It should say the same thing we have talked about this morning. If, after reading it over, it means something different to you, bring up the point of difference with me in the next few days.

GENERAL INSTRUCTIONS FOR USING
THE "EVALUATION" FORM

Each question directs the evaluator to examine some action (including procedures, operations, and events). Each of those actions will have causal factors. One of the causal factors will be ATFA concepts (systems, organization or doctrine), but this will not be the only factor that will cause success or failure of an action. Some of the other factors which could cause an action to fail or succeed are:

1. Proficiency of men and units in ATFA concepts.
2. Proper number of personnel may or may not be authorized for maneuver.
3. Proper amount of equipment may or may not be authorized for the maneuver.
4. Unit or person may be performing a function assigned only for purposes of this maneuver.
5. Person or unit may not be performing a function in this problem that they ordinarily would in combat.
6. Some units may not be scaled to the same strength as others for the maneuver.

Since the outcome of any action will not usually reflect only the causal factor of "ATFA concepts" but several causes, the evaluator must look for evidence of the influence of all the factors each time he observes the action designated by a question. The answers to questions are of no value without knowing what part the ATFA concepts played in producing the action. The evaluator must look for evidences of all other factors in the auxiliary actions that produced the overall action on which he is reporting. In some cases the supporting actions will themselves be dependent upon the same multiple causal factors as the main action. This latter case will be especially true at the higher levels such as corps and army. In either case the evaluator is to record the "factual" supporting evidence in the appropriate

space. This requires descriptions of the main action, and if necessary descriptions of the auxiliary actions.

He will make his judgment in the "why" space. The amount of description needed in "why" and the "evidence" spaces will depend on the outcome of the action. If the action is successful it will usually be because the ATFA concepts on that point were correct and the proficiency was not low. There are exceptions to this however. For instance, the unit may be so high in proficiency that they could literally "make any system work" or they may not be scaled down to the same strength as other maneuver units and consequently have more strength to perform the action than under normal conditions. In those, or similar situations, the "why" judgment will still have to be made and entries made in the "evidence" spaces. If the action is not successful all other spaces must be filled in. If the judgment is made that the pertinent ATFA concept was adequate even though the action was a failure, the adequate space is checked. The factor or factors which were responsible for the failure must then be entered in the "why" space and the pertinent aspects of the situation described to show how those other factors were responsible for the failure.

In the case where the action fails and the judgment is made that the ATFA concepts were responsible the inadequate or marginal space is checked, depending on the judgment of extent to which the ATFA concept was faulty. The "why" and "evidence" spaces are also filled in listing the ATFA concepts and all other factors which caused the failure and their situation descriptions.

In summary the person using the evaluation sheet, after filling in the "box" information does the following:

1. Observes the action specified by the question with a view to answering causal questions.
2. Makes the judgment of what causal factors were important in effecting the action in the question and obtains all evidence he possibly can on which he must base his judgment.

3. Makes a judgment on the adequacy of the ATFA concept involved and enters a check mark in the appropriate "adequacy" space.

4. Enters all causal factors he believes were important in producing the action in the "why" space.

5. Enters descriptions of the aspects of the action on which he based his judgments in the "Factual Supporting Evidence" space. (All factors listed in the "why" column should be covered).

6. Makes recommendations, if appropriate.