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FINAL REPORT EVALUATION OF REFORGER 77 CONUS DEPLOYMENT/REDEPLOYMENT

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UNITED STATES READINESS COMMAND
MacDILL Air Force Base, Florida 33608

FINAL REPORT
EVALUATION OF REFORGER 77
CONUS DEPLOYMENT AND REDEPLOYMENT

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PART I - EXECUTIVE SUMMARY

1. The evaluation of the Continental United States (CONUS) deployment activities for REFORGER 77 included the movement of more than 1550 tracked/wheeled vehicles plus assorted miscellaneous equipment from Fort Carson, Colorado and Fort Riley, Kansas via rail to the Military Ocean Terminal, Bayonne, New Jersey (MOTBY). Offloading of the trains and the loading of the vessels for the sealift movement between MOTBY and European ports of debarkation were included. In addition, the airlift of more than 12,600 troops via Military Airlift Command (MAC) aircraft from McConnell AFB, Kansas and Peterson AFB, Colorado was evaluated.

2. Overall, deployment operations were satisfactorily accomplished. There were no serious accidents or incidents. Damage to unit equipment incident to shipping and handling was minimal. The administrative nature of the movements was such that no problems were encountered in meeting the deployment schedule. There were no evaluation findings which would indicate a serious impairment of readiness to deploy in a real world contingency.

3. The CONUS redeployment through the MOTBY was a repeat of the deployment - that is, there were no significant problems. Activities at that location were accomplished as scheduled. The ill-fated incident with the SEATRAN WASHINGTON in the North Atlantic detracted from an otherwise superb CONUS redeployment through the Port of Beaumont, Texas.

4. Significant evaluation observations are as follows:

a. The deployment was an administrative movement. The planning phase for the REFORGER 77 deployment spanned a period of almost a year. This permitted a degree of planning which could not be expected in a real world contingency deployment. Deployment and execution planning using the Joint Operation Planning System (JOPS) and deployment reporting system (DEPREP) were not exercised.

b. Improvements in rail outloading capabilities, to include deployment of rail loading plans and rehabilitation and upgrade of facilities, are required at major Army installations.

c. Rail loading procedures for tracked and armored vehicles need to be revised to facilitate more rapid loading for time sensitive deployments. Procedures used in the Federal Republic

of Germany provide an expedient alternative procedure which should be evaluated for use in the United States.

d. Additional training for supervisory and rail car loading personnel is required. Evaluations of REFORGER 76 and REFORGER 77, as well as other rail deployments, indicate a generally low level of proficiency in rail loading procedures and techniques. While proficiency can be gained in a relatively short period of time, a cadre of trained personnel is needed to form a nucleus from which to build to support large-scale deployments.

5. It is recommended that future REFORGER exercise planning and budgeting consider the development of scenarios which will reduce the artificialities inherent in administrative movements. This is needed to provide more realistic training in planning and executing the deployment of a major force in a simulated contingency.

PART II - GENERAL OBSERVATIONS

1. Overview of Deployment and Redeployment Activities: This evaluation report encompasses REFORGER 77 CONUS deployment and redeployment activities. These activities included rail movements of the 1st Infantry Division from Fort Riley, KS and the 4th Infantry Division (Mechanized) from Fort Carson, CO to the Military Ocean Terminal, Bayonne, NJ (MOTBY); airlift movements of these divisions from McConnell AFB, KS and Peterson AFB, CO, respectively, to selected European aerial ports of debarkation (APOD); ocean terminal operations at MOTBY and the Port of Beaumont, TX; as well as the operations of the 1st Corps Support Command (COSCOM) Emergency Operations Center/Deployment Control Center (EOC/DCC) at Fort Bragg, NC.

a. Deployment:

Time phasing of REFORGER 77 CONUS deployment activities is shown at TAB A.

The deployment of CONUS forces to Europe for Exercise REFORGER 77 offered another opportunity to test joint techniques and procedures in a large scale unit movement by intermodal means. A major segment of the combat resources of the 4th Infantry Division (Mechanized) and a lesser segment of the combat resources of the 1st Infantry Division moved by rail to the MOTBY for sealift to Europe. Equipment of supporting, non-divisional units closed at Bayonne via commercial truck, and three helicopters self-deployed from Fort Hood, TX to round out equipment staging at the ocean terminal. Approximately 12,600 troops were strategically airlifted from 12 CONUS locations directly to Europe by C-141's of the Military Airlift Command's (MAC) 438th Military Airlift Wing (MAW), in a surge test operation.

Rail deployments from Fort Carson and Fort Riley went essentially as planned. No significant problems were encountered incident to preparation and rail loading, or while in transit. The absence of any significant problem areas substantiates the degree of preplanning, coordination, and supervision accomplished to insure the operational success of the moves. The four railcar malfunctions which occurred en route cannot be considered inordinate and in no way impacted on the ships' loading or sailing schedules.

The movement of equipment of the non-divisional units via 35 commercial trucks was routine. All trucks arrived

at Bayonne by the evening of 8 August 77; two days ahead of ships loading.

Self-deployment of three helicopters from Fort Hood, TX to Bayonne was delayed two days (3 August 77 to 5 August 77) for maintenance reasons. Again, this delay had no adverse effect on the deployment schedule in that the helicopters arrived at Bayonne on the evening of 7 August 77; three days ahead of ships loading.

By 10 August, all equipment to be deployed by sealift was staged at Bayonne. Loading was originally scheduled to begin on 12 August, but, in fact, began on the 11th. The ships designated to accomplish the REFORGER sealift were the (GTS) ADMIRAL CALLAGHAN and the SEATRIN WASHINGTON, with the United States Naval Ship (USNS) COMET named as a backup vessel. The SEATRIN WASHINGTON was to be activated from the National Defense Reserve Fleet (NDRF), as an exercise objective of REFORGER 77, and returned to the Ready Reserve Fleet (RRF) at the conclusion of the exercise. The ADMIRAL CALLAGHAN berthed at the MOTBY on 5 August for discharge and cleaning prior to the REFORGER 77 deployment. The SEATRIN WASHINGTON was retrofitted and ran seatrials beginning 7 August. As a result of deficiencies noted during the seatrials, the decision was made on 9 August to substitute the USNS COMET (already on berth at MOTBY) for the SEATRIN WASHINGTON. The ships loading began on 11 August and was completed on the 13th; two days ahead of schedule. The early completion of the loading is attributed largely to the fact that the USNS COMET is a roll on/roll off (RO/RO) vessel, which lends itself to more rapid loading than would have been the case had the SEATRIN WASHINGTON been used. In any event, the ADMIRAL CALLAGHAN and the COMET sailed as scheduled on 16 August.

Overall, the CONUS surface deployment was very successfully executed. The seventeen days elapsed time from the beginning of rail loading until all equipment was staged at the port was more than enough time to accomplish the move, certainly more time than would reasonably be expected in a real world contingency. Nonetheless, participating units received valuable training in the capabilities and procedures which must be implemented to support real world contingency requirements.

b. Redeployment

Surface redeployment spanned the period 8 October through 21 November 77 from ships loading in Europe to the last arrival

of equipment and personnel at the CONUS home station. The ADMIRAL CALLAGHAN was loaded at Bremerhaven for discharge at Bayonne. The SEATRAN WASHINGTON, which replaced the USNS COMET for the redeployment, berthed at Rotterdam to be loaded for discharge at Beaumont, Texas. The CALLAGHAN sailed from Bremerhaven on 12 October and berthed at Bayonne on 17 October as scheduled. The SEATRAN WASHINGTON experienced severe storms and was forced to divert to the Azores to relash cargo before proceeding to Beaumont. She was scheduled to arrive at Beaumont on 25 October, but did not berth until approximately 0200 hours, 6 November 77.

Loss and damage to REFORGER 77 equipment during the voyage of the WASHINGTON were determined to the extent possible at the Port of Beaumont. Two CONEX containers with various military impedimenta, one 2 1/2-ton military design truck, and one 1/4-ton military jeep were lost at sea. Severe damage occurred to four CONEX containers and twelve 1/4-ton military jeeps. Minor damage was sustained on the three UH-1H helicopters. The extent of total damage can only be assessed by the participating units after necessary repairs have been accomplished.

The CONUS surface redeployment was largely a repeat of the deployment -- there were no significant problems. Experience gained during deployment was advantageously applied to avoid similar pitfalls during redeployment.

2. Planning:

Transportation planning for the CONUS portion of the deployment and redeployment was extensive and, in most cases, thorough. The entire planning period was marked with a succession of planning conferences and coordination meetings, which involved the participating units, intermediate and higher headquarters, the transportation operating agencies (TOA), supporting units, and at least two other governmental agencies (US Customs and Department of Agriculture). Every effort was made to assure operational success within applied fiscal constraints.

REFORGER 77, while viewed as a successful exercise, was not planned and executed as would be expected in a real contingency deployment. It was, in fact, an administrative movement of forces. REFORGERS 76 and 77 have been significant demonstrations of planning and executing multimodal large-scale deployments to Europe. The task for the future is to

capitalize on REFORGER as the best available opportunity to remove, as far as possible, the artificialities inherent in administrative movements and insert a degree of realism that will flex the strategic mobility system. By so doing, it is possible to expand and validate deployment planning and execution. This can best be achieved by the introduction of greater time sensitivity and the insertion of necessary simulations to create a more dynamic, fluid scenario.

3. Rail Operations:

The rail movement of units of the 1st Infantry Division and 4th Infantry Division (Mechanized) was satisfactorily accomplished. There were no serious personnel injuries, all trains departed on schedule, and damage to equipment during transit to MOTBY was minimal.

Prior coordination and preplanning were evident throughout the deployment. Leadership within the divisions, units, and supporting installation activities was dynamic, professional and positive. Directives in the form of letters of instruction and movement plans were comprehensive, concise, and provided sufficient guidance to all concerned. Maintenance and preparation of equipment to be deployed was exceptionally well done in that there were no substitutions of armored or wheeled vehicles from other divisional units, and all equipment departed in combat serviceable condition. Prior training was accomplished to teach rail equipment loading techniques. Procedures to insure proper documentation were effectively implemented.

At the outset of the rail deployment the units were generally inexperienced in both the technical and administrative aspects of rail movements. This situation was not unlike that experienced by the 101st Airborne Division (AASLT) during REFORGER 76 or the situation observed during other exercise rail movements. At Fort Carson, the learning curve developed rather rapidly so that by the time all four trains had been loaded the level of proficiency was well advanced. Unfortunately, the learning curve at Fort Riley never really developed. This is attributed to the fact that only one 56-car train was loaded and moved from that installation. Rather than using a single rail load team cadre, numerous units loaded several railcars each so that no definite measure of proficiency could be established. Generally, supervisors and loading personnel at both locations were eager to correct deficiencies and to do their jobs correctly. An unusually high level of esprit de corps and a dominant "can-do" attitude permeated the entire operation. Everyone was interested in

insuring the operational success of the move. Specific observations and deficiencies along with recommended actions are contained in Part III of this report.

Rail redeployment operations from MOTBY and the Port of Beaumont were largely a contracted operation. At both locations, rail car loading was accomplished by contract stevedores with Military Traffic Management Command (MTMC) providing overall control and coordination within the ocean terminal organizations. 1st COSCOM provided port support and representatives from the returning units were also present. Overall, the rail redeployment was outstanding. The personal involvement of the Commander, Eastern Area MTMC, the Commanders, MOTBY and Gulf Outport, along with selected members of their staffs, went a long way to insure the successful return of deployed units to their home stations.

4. Airlift Operations:

The movement of troops of the 1st and 4th Infantry Divisions by strategic airlift was very professionally executed. More than 12,600 troops with "to accompany troops" (TAT) equipment (872 short tons) were airlifted by 139 C-141 aircraft missions and two C-5 missions. While the air deployment was administratively accomplished, it had the unique characteristic of having been accomplished by a single MAC airlift wing, the 438th MAW, in a surge test operation which proved successful.

The thoroughness of planning the deployment was evident throughout. Published operations orders/letters of instruction were comprehensive and provided all essential guidance necessary to conduct the deployment. Passenger loads of 94 troops per aircraft generated as planned, which resulted in full utilization of allocated airlift resources. The original airflow schedule was interrupted for a time by the air traffic controller's strike in England. The required revisions to flight plans and adjustments to the airflow schedule were rapidly accomplished without significant impact at the departure airfields. When permitted by higher headquarters (MACs 21st Air Force) early aircraft departures were the rule. Delayed departures (maintenance delays) were minimal.

The interface between the deploying units, departure airfield control groups (DACGs), and the MAC airlift control elements (ALCEs) was well established. DACG and ALCE personnel were highly motivated and formed a cohesive team to insure a successful deployment. Every effort was made to make the deployment as easy as possible for the individual troop.

Personnel processing times were compressed as much as possible to preclude queues in the chain of events prior to aircraft departure. Troop holding areas featured an assortment of creature comforts, which contributed significantly to the high morale of the troops.

In summary, the airlift of troops for REFORGER 77 was well planned and executed. The air redeployment was observed by USREDCOM personnel in Europe during the period of 4-13 Oct 77, but was not specifically evaluated by this command within CONUS.

5. Port Operations:

The equipment outload at Bayonne was a very smooth and successful operation. The outload was performed by a civilian contractor with overall control and coordination of the REFORGER 77 effort provided by Headquarters Eastern Area MTMC. The interface between the deploying units, the 1st COSCOM Port Support Activity, and MTMC was firmly established in a memorandum of agreement which detailed the duties and responsibilities of the parties concerned. This memorandum of agreement, supplemented by comprehensive letters of instruction, provided a sound base for an efficient operation. Daily meetings with supervisory personnel from all participating units/agencies provided for a well directed and coordinated team effort. Few problems arose and those that did surface were solved by a joint effort of all participants in a very quick and efficient manner. Repeated emphasis was placed on safety and care in handling equipment. As mentioned earlier, the substitution of the USNS COMET for the SEATRIN WASHINGTON resulted in more rapid loading of the vessels so that the operation was completed two days before the ships were scheduled to sail.

The redeployment through MOTBY was a repeat of the deployment. No significant problems were encountered. The same organizational structure used for the deployment prevailed for the redeployment and key personnel were the same. With this core of experience there were very few unanticipated challenges.

The SEATRIN WASHINGTON berthed at the Port of Beaumont on 6 November. The operation at Beaumont was essentially the same as that at Bayonne; in that the ship's discharge and rail loading were accomplished by civilian contractor stevedores with MTMC Eastern Area and Gulf Outport personnel providing the overall direction. The port was well prepared to receive the WASHINGTON.

Many of the people involved in the deployment and redeployment through the MOTBY were also present at Beaumont. The end result was a virtually flawless operation characterized by a spirit of cooperation toward a successful conclusion of REFORGER 77.

6. 1st COSCOM EOC/DCC, FORT BRAGG, NC

Functions of the 1st COSCOM evaluated during REFORGER 77 included not only the EOC/DCC activities at Fort Bragg, but also the CONUS en route logistical support and port support provided at MOTBY and the Port of Beaumont.

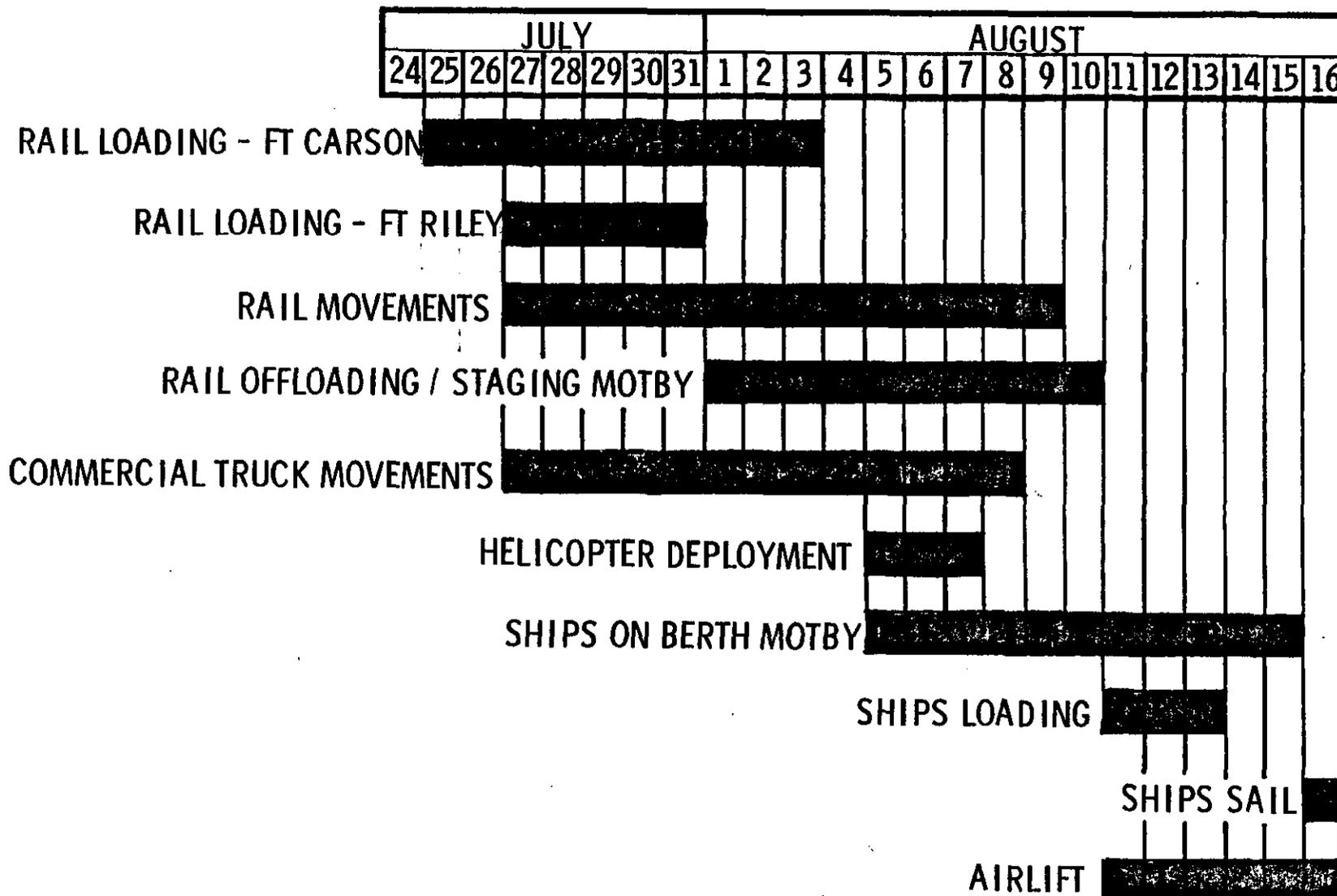
The specific mission of the EOC/DCC for REFORGER 77 was to coordinate and control designated aerial and sea port activities of Army force participants, to provide logistical support for those forces en route to and at the aerial and sea ports, and to provide the command element and combat service support for Army forces at the sea ports. In addition, the 1st COSCOM provided the interface with the transportation operating agencies, provided maintenance support for equipment to be deployed/redeployed, monitored the status of the deployment/redeployment and submitted situation reports to lateral and higher headquarters.

The overall operation of the EOC/DCC was considered exceptional. Without question, this agency maintained the most up to date status of the entire CONUS REFORGER 77 deployment/redeployment operation. Problems encountered were quickly and efficiently resolved through direct contact with the source best able to provide the solution. Situation reports provided by the EOC were timely, extremely comprehensive and served as the most authoritative source in the information flow.

The effectiveness of the 1st COSCOM port support activities in REFORGER 77 warrants the use of this or a similar activity on future deployments of this nature. Their value cannot be underestimated.

II-8

TAB A



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REFORGER 77 CONUS DEPLOYMENT

PART III - SPECIFIC FINDINGS

1. Planning:

a. Observation: REFORGER 77 did not exercise the normal deployment planning process.

b. Discussion: Deployment planning, as relates to deployment of forces for major contingencies, was not a part of the REFORGER 77 exercise. As mentioned in Section II, the planning process included a series of planning conferences and coordination meetings over the span of almost a year. Virtually every unit and agency remotely involved in the exercise were represented at one or more of the meetings. The end result, of course, was a well planned administrative movement, not a test of established deployment procedures. USREDCOM was not exercised as the supporting Commander-in-Chief (CINC), nor were Joint Operations Planning System (JOPS)/Deployment Reporting System (DEPREP) procedures used. REFORGER 76 and 77 have been successful demonstrations of multimodal movements, and serve as a point of departure for development of more realistic deployment exercises. JOPS/DEPREP are being considered for use in REFORGER 80 as a first test in a major overseas deployment.

c. Conclusion: REFORGER 77, as an administrative movement was thoroughly planned and executed, but did not incorporate established deployment planning and reporting procedures.

d. Recommended Action : That future REFORGER exercise planning incorporate scenarios which will more realistically exercise deployment plans and procedures. JOPS/DEPREP should be included at the earliest possible time.

2. Airlift Control Element (ALCE) Operations:

a. Observation: The ALCEs at McConnell AFB, KS and Peterson AFB, CO, were effective in controlling, coordinating, and servicing airlift missions in support of REFORGER 77.

b. Discussion: ALCEs from the 438th MAW and the 62nd MAW, provided support for REFORGER 77 at McConnell AFB and Peterson AFB, respectively. At both locations, the ALCEs were organized and situated to establish an effective interface with supported units. All airfield activities were well supervised and coordinated to insure on-time departures within the two hour fifteen minute allotted ground time. The maintenance effort was particularly noteworthy, in that all aircraft used for the REFORGER

77 deployment were from one MAC wing and many of the aircraft required varying degrees of maintenance before departing for Europe. Maintenance delays were minimal and early departures were the rule when permitted by 21st Air Force. The original airflow schedule was interrupted for a time by the air traffic controllers' strike in England. Despite some revised flight plans and resulting schedule changes, the ALCEs were able to adjust rapidly to preclude any significant impact at the departure airfields.

c. Conclusion: The support provided by the MAC ALCEs was commendable.

d. Recommended Action: None

3. Departure Airfield Control Group (DACG) Operations:

a. Observation: DACG operations at Ft Riley/McConnell AFB, KS and Ft Carson/Peterson AFB, CO, were well planned and executed.

b. Discussion: DACG operations were accomplished by non-divisional post units. DACG planning in the form of letters of instruction was thorough and comprehensive. The rapport between the divisions and the ALCEs was outstanding, which contributed significantly to an overall smooth operation. Deploying troops were positively controlled at all times and special services support was impressive. Every effort was made to minimize troop processing and waiting time. In summary, DACGs accomplished their mission satisfactorily and were prepared to react rapidly to changes and unforeseen problems.

c. Conclusion: DACGs operated in an excellent manner.

d. Recommended Action: None

4. Port Operations:

a. Observation: Port operations at the MOTBY, and the Port of Beaumont were well coordinated and managed.

b. Discussion: The relatively problem free operations at the MOTBY and the Port of Beaumont are largely attributed to the well organized, coordinated, and managed activities that made up the operation. Under the overall control of MTMC, the major participating agencies were molded into a cohesive team that produced commendable results. The personal involvement

of the Commander Eastern Area MTMC and the Commanders of the MOTBY and Gulf Outport contributed significantly to a smooth operation. Daily meetings hosted by MTMC with management level representatives from all major participants and port authorities provided a forum for assessing progress, forecasting, and solving problems, as well as planning future events.

c. Conclusion: Port operations at the MOTBY, and the Port of Beaumont were carried out in an exemplary manner.

d. Recommended Action: None

5. Planning for Strategic Air Movements:

a. Observation: Planning for the air movement of troops participating in REFORGER 77 was thorough and detailed.

b. Discussion: Early, comprehensive planning by participating units and MAC produced airlift flow plans and support plans which very successfully satisfied the troop deployment requirement of REFORGER 77. By the close of the USREDCOM REFORGER 77 planning conference in April 77, deployment air flow plans were almost final, and the redeployment air flow plans were well into development. MAC's initiative to use a single airlift wing to support the troop deployment was probably the most unique feature of the REFORGER 77 deployment. That effort was apparently successful. While the significance and success of this effort was impressive, added realism in the strategic deployment of troops to Europe can be gained by using or simulating the use of Civil Reserve Air Fleet (CRAF) resources. Limiting the movement of REFORGER troops to only MAC C-141 aircraft is not realistic in exercising during peacetime what we would do in wartime. European contingency plans require the majority of the augmentation troops to arrive by CRAF aircraft, and the REFORGER/CRESTED CAP exercise provides an excellent opportunity to use CRAF, or to simulate procedures for using CRAF, in support of United States European Command augmentation airlift requirements. Despite the administrative character of the airlift, i.e., single type aircraft (C-141s) with standard configuration (94 passengers, plus baggage), the airlift of troops was an impressive exercise.

c. Conclusion: A large-scale troop deployment such as REFORGER provides a realistic scenario for the introduction of the simulated use of CRAF commercial contract aircraft.

d. Recommended Action: That future REFORGER planning and budgeting incorporate the simulated use of Civil Reserve Air Fleet (CRAF) (commercial contract aircraft) for both cargo and troop airlift.

6. Rail Outloading Capabilities:

a. Observation: 4th Infantry Division (Mechanized) and Ft Carson, CO do not have sufficient capability to adequately support and manage large-scale, time constrained deployments.

b. Discussion: During the deployment of the 3rd Brigade, 4th Infantry Division (Mechanized) for REFORGER 77, it was apparent that, should all of the combat resources of the 4th Infantry Division (Mechanized) be required to deploy rapidly or simultaneously, then additional railheads and loading docks would be needed. Also, agencies within the installation staff responsible for providing blocking and bracing material and for insuring the adequacy of packing, preservation, load preparation, documentation and loading must be given sufficient manpower to properly supervise and conduct deployment operations. Specifically, additional manpower and supervisors are needed within the Installation Transportation Office (ITO) and the Director of Facilities Engineering (DFAE) packing and crating section to provide the necessary material and technical assistance to support deploying units, and to insure that combat equipment prepared for deployment will be shipped rapidly and in a serviceable condition. The foregoing observations are documented and expanded upon in Military Traffic Management Command (MTMC) Report TE 77-27, "Rail Outloading Capability Study, Fort Carson, Colorado" dated July 1977. Further investigation revealed that the shortfalls noted at Fort Carson are not peculiar to that installation. Studies conducted by MTMC at Fort Campbell, KY; Fort Polk, LA; Fort ORD, CA; Fort Hunter-Liggett, CA; and Fort Hood, TX, disclose similar deficiencies in rail outloading capabilities to support large-scale, time constrained deployments.

c. Conclusion: Significant improvements in rail outloading capability are required at many major Army installations.

d. Recommended Action: That the Department of the Army undertake a systematic program to budget for and fund the rehabilitation, upgrade and expansion of post rail facilities where necessary.

7. Training for Rail Car Loading:

a. Observation: Rail outloading supervisors and personnel require additional training in cargo blocking, bracing and tie-down procedures.

b. Discussion: During unit moves, it is the unit's responsibility to insure that the material being loaded is packed, braced, blocked, and tied down in a prescribed manner, which will adequately protect the cargo during transit. It is essential to know how to safely secure cargo for the selected mode of transportation. While considerable hands on rail training had been conducted at Fort Carson and Fort Riley for supervisors and equipment loading personnel prior to deployment for REFORGER 77, several load preparation deficiencies occurred, which could have been avoided through additional training and closer supervision. Examples are as follows:

(1) Several communication vans were shipped in a gondola car without being properly blocked and braced to prevent shifting. When the vans arrived at Bayonne it was observed that the minimal floor bracing had been splintered and that the exterior of the vans were scratched and gouged. Personnel at MOTBY could not determine if the interior components had been damaged, which necessitated flying technicians from Fort Carson to MOTBY to evaluate the situation. It was determined that the equipment was serviceable; however, the round trip expense of sending the technicians to MOTBY could have been avoided had proper blocking and bracing methods been employed.

(2) The use of ½-inch strap banding to secure loads on trucks and to secure inverted trailers on one train revealed the need to use heavier banding material to prevent load shifting. Also, wire strands were used to secure some vehicles when sufficient chain tie-down devices were not available on the bilevel rail cars in that train. Many of the wire tie-downs snapped during the move and cable was used on the remaining three trains. Although there was no vehicle damage caused by the broken wire tie-downs, it should be noted that use of wire to tie down vehicles is prohibited by the Association of American Railroads.

c. Conclusion: Expanded supervisor classroom and "hands-on" training, along with improved technical/field manuals depicting approved loading procedures, could preclude incidents of the nature described in paragraph 7b. above.

d. Recommended Action: For future deployments such as REFORGER exercises, recommend that United States Army Forces Command/Deputy Chief of Staff, Logistics (FORSCOM/DCSLOG), insure that unit training concerning proper loading, blocking, bracing is adequate. Assistance from transportation agencies within the Army, the TOAs as well as the rail and trucking industries is encouraged.

8. Improved Rail Loading Procedures for Armored Equipment:

a. Observation: Blocking, bracing, and tie-down procedures for movement of heavy armored vehicles by rail require revision to permit more rapid deployment.

b. Discussion:

(1) Current procedures for loading and securing tanks and other heavy armored vehicles on railroad flat cars require the following:

(a) Construction of a wooden H-frame, which is nailed to the bed of the flat car.

(b) Chocks secured to the front and rear of each track.

(c) Wedges nailed between the rubber road wheels on the tracks.

(d) Crisscrossed cable tie-downs at the front and rear of each tank.

The loading method described above and used at Fort Carson, requires approximately one hour and forty-five minutes to secure one tank for shipment.

(2) Within the Federal Republic of Germany (FRG) a different railloading method is used, which saves considerable time, labor, and material. The method was demonstrated and photographed at Fort Carson. Significant features of this method are as follows:

(a) Construction of wooden H-frames is not required. (In the Fort Carson demonstration an H-frame was constructed between the tracks of the vehicle.)

(b) No wedges are required between the tank road wheels.

(c) Tie down of the tank is accomplished by large turnbuckles. Each turnbuckle has a cable loop at each end for attaching to the tank and railcar. Two turnbuckles are crisscrossed at the front and rear of the tank and drawn tight. This completes the loading process. The advantage of this method is that only 17 minutes are required to load and secure a tank. Without an H-frame, a loading crew (or tank crew) could secure a tank within nine to ten minutes.

c. Conclusion: More simplified railloading procedures can be successfully employed to reduce time and cost associated with the movement of heavy armored equipment.

d. Recommended Action: HQ FORSCOM/DCSLOG, in conjunction with appropriate Army agencies and the Association of American Railroads, should investigate the feasibility of adopting the railloading methods used within the FRG for moving tanks and other armored vehicles. Should the turnbuckle method be approved, it is recommended that FORSCOM armored units to be deployed by rail, obtain, prepare, and maintain the material and turnbuckle devices to permit rapid deployment. Should the simplified loading procedure not be adopted, then applicable FORSCOM armored units must insure that adequate stocks of chocks, wedges, cable, cable stretchers, clamps, etc., are readily available to support a time sensitive deployment schedule.

9. Shipments of Sensitive Cargo:

a. Observation: The uncoordinated shipment of sensitive cargo to the port of debarkation generated an unplanned security requirement which the port was not totally prepared to handle.

b. Discussion: Thirty Tube-launched, Optically-tracked Wire-guided (TOW) missile carriers were shipped by the 4th Infantry Division (Mechanized) to MOTBY with sensitive components intact. Guard surveillance was provided while the carriers were en route. Once the train arrived at MOTBY a 24 hour guard requirement existed; however, MOTBY personnel had not been given advance notice by the 4th Infantry Division that the arriving cargo necessitated such security measures. After a 24 hour period, a decision was reached between the 4th Infantry Division and MOTBY personnel to remove the sensitive components from the carriers and provide the necessary security by putting the components in CONEX containers to be locked in a warehouse. Questions remained unanswered for the next 72 hours as to how the carriers would be shipped aboard the vessel, i.e., with or without the sensitive components apart from the carriers under signature service procedures with the ship's crew.

c. Conclusion: Shipments of sensitive cargo must be identified early in the planning cycle to preclude unexpected security requirements at intransit locations and transshipment points.

d. Recommended Action: That deploying units identify sensitive cargos early in the planning cycle and provide advance notification of such shipments to the TOAs and intransit/transshipment points.

10. Exercise Seaport Selection:

a. Observation: The use of the MOTBY as a deployment port offered little or no challenge in testing military deployment capability.

b. Discussion: Utilization of the MOTBY for REFORGER 77 deployment offered a minimal test of the military sealift deployment capability. All of the unloading of rail cars and subsequent loading aboard ship was accomplished by a civilian contractor through a port that routinely handles military cargo. The enormous capability at MOTBY over-shadowed many potential problems that might arise at most other ports of embarkation. In essence, there was little to be tested or evaluated by using a civilian contractor in conjunction with a port facility such as MOTBY. Military terminal services units and reserve port detachments are available in CONUS, but gain little training on actual unit deployments, since they are not allowed to compete with civilian industry. At the same time, there are commercial seaports that figure into contingency operations which do not routinely handle military cargo that could be used for a deployment exercise such as REFORGER.

c. Conclusion: The selection of commercial seaports that seldom handle military cargo and the integration of military terminal services units and/or reserve port detachments would provide a training opportunity not previously used. Experience could be realized for the terminal service units/port detachments who are not accustomed to handling large-scale military loading operations. Also, the capability of the civilian port to accommodate military units in a wartime scenario could be analyzed.

d. Recommended Actions:

(1) That future REFORGER planning consider the use of commercial seaports identified for contingency use.

(2) That consideration be given to integrating terminal service units/reserve port detachments into REFORGER port operations.

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CONUS DEPLOYMENT AND REDEPLOYMENT

<u>DISTRIBUTION</u>	<u>NO. CYS</u>
JCS (J3/J4/J5) WASHINGTON DC 20301	3
USCINCEUR (J3/J4/J5) APO NEW YORK 09128	3
CINCLANT NORFOLK VA 23511	3
CINCUSAREUR APO NEW YORK 09403	3
CINCUSAFE APO NEW YORK 09012	1
USCINCARRED FT McPHERSON GA 30330	3
USCINCAFRED LANGLEY AFB VA 23665	2
CDR MTMC WASHINGTON DC 20315	3
CDR MTMCEA BAYONNE MIL OCEAN TERMINAL NJ 07002	3
CDR MTMC GULF OUTPORT, NEW ORLEANS, LA 70146	1
COMSC WASHINGTON DC 20390	3
CDR MAC (DOX) SCOTT AFB IL 62225	2
21 AF (DOX) McGUIRE AFB NJ 08641	1
CSAF WASHINGTON DC 20330	1
CSA WASHINGTON DC 20310	1
CNO WASHINGTON DC 20350	1
CDR TRADOC FT MONROE VA 23351	1
CDR USALC FT LEE VA 23801	1
COMDR TRANS SCH FT EUSTIS VA 23604	1
CDR XVIII ABN CORPS FT BRAGG NC 28307	2
CDR 1ST COSCOM FT BRAGG NC 28307	2
CDR 4TH INF DIV (MECH) FORT CARSON, CO 80913	3
CDR 1ST INF DIV FORT RILEY, KS 66442	3
COMDT US COAST GUARD (G-WLE) WASHINGTON DC 20226	1
USREDCOM	16
J3	(1)
J3-T	(1)
J3-0	(1)
J4	(1)
J4-L	(1)
J4-M	(1)
J5	(1)
J5-P	(1)
J5-0	(1)
J5-E	(5)
J1	(1)
AG-SL (LIBRARY)	(1)

