



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

AUG 5 1983

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Lieutenant General Richard H. Thompson
Deputy Chief of Staff for Logistics
Department of the Army



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Dear General Thompson:

Subject: Opportunities to Improve the Effectiveness
of the Army's Logistics Review Process
(GAO/NSIAD-83-25)

At each milestone decision point in the systems acquisition process, the Army requires that integrated logistics support (ILS) planning be independently reviewed. These reviews are performed by the Office of Deputy Chief of Staff for Logistics and its subordinate activity, the Logistics Evaluation Agency (LEA). We reviewed this independent review process which we believe plays a vital role in helping to assure that the Army's systems are supportable. The role of the independent ILS evaluator is becoming more important as the Department of Defense and the Army increase their emphasis on systems supportability by requiring that resources to achieve readiness receive the same emphasis as those required to achieve schedule and performance objectives.

Based on our work, we believe that improvements can be made to make the Army's independent ILS review process more effective. Specifically, we found that:

- Cursory ILS reviews are being made on some Army systems. As a result, problems may go undetected, thus increasing the likelihood that these systems will experience support shortfalls when fielded.
- LEA is not always receiving complete and timely data on which to make its ILS reviews. Most critical is the fact that the final test and evaluation reports are not always available for its review, and testing agencies tend to be reluctant to share their interim findings with LEA. As a result, it is questionable if LEA can adequately evaluate the logistics planning and supportability of affected systems.

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- Although both DCSLOG and LEA reports discuss specific logistics problems, they do not routinely identify the actions needed to correct the problems. In addition, they have no formal follow-up procedure to assure that logistics problems are corrected in a timely manner.
- The criteria used to define the significance of logistics problems identified by the ILS reviews tend to be too subjective and need to be more objectively related to operational readiness.

Detailed information on our findings and conclusions is contained in the enclosure to this letter.

To strengthen the Army's independent logistics review process and ultimately better assure the supportability and readiness of newly fielded systems, we are recommending that you:

- Examine ways to better assure that Army systems receive a sufficient, independent review of the adequacy of their ILS planning. As a part of this examination, you should reassess the adequacy of LEA's personnel resources devoted to ILS reviews with a view toward bringing any mismatch between responsibilities and staffing more into line. This will require that LEA update its basis for estimating staffing requirements so that the true magnitude of any shortfall can be evaluated.
- Emphasize the need for participants in the acquisition process to provide LEA the timely and complete data which it needs to do its reviews. This should include the sharing of interim test results between LEA and Army testing agencies.
- Require that the outcome of DCSLOG and LEA reviews includes specific written recommendations for corrective action, and identifies the activities responsible for accomplishing them. Also, require DCSLOG and LEA to develop a more formal system for following up on the actions taken to correct the problems.
- More objectively define the significance of problems identified, in terms of their potential impact on systems readiness.

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We would appreciate receiving your comments on the matters discussed in this report and any actions taken or planned on

our recommendations. We have discussed this report with your staff who generally agree with its contents and the recommendations. We are sending copies of this report to the Secretary of Defense and the Secretary of the Army.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Dick Connor / for".

Henry W. Connor
Senior Associate Director

Enclosure

OPPORTUNITIES TO IMPROVE THE
EFFECTIVENESS OF THE ARMY'S INDEPENDENT
LOGISTICS REVIEW PROCESS

INTRODUCTION

In recent years, the Department of Defense has revised its guidance concerning the weapon systems acquisition process to provide that resources to achieve readiness will receive the same emphasis as those required to achieve schedule or performance objectives. Sound integrated logistic support (ILS) planning is a process which can contribute to improved readiness and cost effective logistics support of systems. Department of Defense Directive 5000.39, which contains overall Defense policies and responsibilities for accomplishing ILS planning, requires that ILS reviews be made of the adequacy of logistics plans, resources, and support related parameters at each acquisition milestone. The Army is implementing this requirement through independent logistics reviews made by the Office of the Deputy Chief of Staff for Logistics (DCSLOG) and its field activity, the Logistics Evaluation Agency (LEA).

In its role as the Army's independent logistician, LEA makes preliminary reviews of all major systems with DCSLOG making the final review based on LEA's input. LEA is also responsible for the final reviews on all non-major systems. The reviews address the following elements of the ILS process: (1) maintenance plan, (2) support and test equipment, (3) supply support, (4) transportation and transportability, (5) technical data, (6) manpower and personnel, (7) training and training devices, (8) facilities, (9) computer resources support, (10) materiel fielding planning, (11) design influence, (12) standardization and interoperability, (13) reliability, availability, and maintainability, (14) support management and analysis, and (15) cost analysis and funding.

LEA has three divisions and a Resource and Automation Management Office. Their staff authorization, as of December 1982, is 129 personnel. The ILS review function is carried out by the ILS Division, which has an authorized staff of 26 personnel.

Acquisition decision process

In the Army acquisition process, there are four principal parties--materiel developer, combat developer, testers and evaluators, and the logistician. It is the materiel

developer's overall responsibility to plan and implement an ILS program as part of assigned materiel acquisition programs.

Army development systems are classified into four decision level categories--(1) Major programs, (2) Designated Acquisition programs, (3) Department of the Army In Process Review programs, and (4) In Process Review programs. The first two categories are referred to as major systems. The second two categories are referred to as non-major systems. These classifications depend on such factors as funding level, urgency of need, development risk, and congressional interest. For all major systems, LEA's ILS Division is required to prepare a written report for DCSLOG prior to each acquisition decision milestone. DCSLOG uses this preliminary report, together with other available information in preparing an ILS appraisal paper for the Army review body, the Army Systems Acquisition Review Council, of which it is a member. For non-major systems, which constitute over 90 percent of the Army's acquisition programs, the ILS Division's role changes to that of a voting member at In Process Reviews (IPRs)--which are the decision reviews. The other voting members at IPRs are the materiel developer and the combat developer. For non-major systems, the ILS Division examines each ILS element and develops an agency position of concurrence, conditional concurrence, or nonconcurrence with regard to the materiel developer's proposed course of action.

The objective of our review was to evaluate the adequacy of the Army's policies, practices and procedures for conducting its independent logistics reviews. We met with Army officials responsible for carrying out the reviews, examined the reports and other documents integral to the review process, and reviewed pertinent Defense and Army regulations and directives. We made our review at the Army headquarters, DCSLOG and at LEA in New Cumberland, Pennsylvania.

Our review was performed in accordance with generally accepted government auditing standards.

CURSORY REVIEWS ARE BEING
MADE ON SOME SYSTEMS

Problems associated with adequately supporting newly fielded systems have existed for a long time. In part, these problems are due to the fact that logistics support has not been adequately addressed during the acquisition process, especially early in the design phase. While ILS planning is a disciplined process to assure that planning for supportability is done, our past work has identified numerous problems in the actual implementation of good ILS planning. It is for this reason that we view the role of the independent ILS evaluator in the Army to be an important one.

However, this role can be most effective only if there is sufficient ILS review of all Army systems. The Army recognizes this and requires that all its systems be independently reviewed for adequacy of ILS planning. Yet, we were told that because of increasing responsibilities LEA is able to make only cursory reviews of the ILS planning for some Army systems, which, in its judgement, are not sufficient to assure the adequacy of systems supportability.

While we did not do a comprehensive evaluation of workload and staffing levels, there does appear to be a mismatch between the workload of the agency and its personnel resources. In addition, the basis for its estimating personnel requirements may not accurately reflect its true personnel situation.

Staffing and workload

The ILS Division, in January 1983, had a staff of 26, including 19 action officers directly responsible for monitoring and reviewing ILS planning for all Army systems actively under development (807 systems as of December 1982). Division procedure for assigning action officer workload is based on several factors including system priority and personnel grade level. Due to the number of programs under development some action officers have responsibility for a very large number of systems. The table below shows the number of systems assigned to five of the action officers as of December 1982.

ACTION OFFICER

APPROVAL/REVIEW LEVEL

	<u>Major Programs</u>	<u>Designated Acquisition Programs</u>	<u>Department of the Army In Process Review Programs</u>	<u>In Process Review Programs</u>	<u>Total Programs</u>
A	-	5	-	29	34
B	-	3	-	36	39
C	6	1	9	67	83
D	-	-	5	76	81
E	-	-	5	124	129

Generally, lower grade level personnel have responsibility for non-major systems and higher grade level personnel have responsibility for major systems. Although non-major systems usually have less elaborate ILS planning than major systems, it is difficult to see how action officers can maintain a good working knowledge of each system for which they are responsible. In fact, LEA acknowledges that it cannot conduct sufficient reviews on some systems to assure the adequacy of system supportability.

ILS Division officials also informed us that the division has been assigned other tasks which further dilute the resources available for ILS reviews. The increase in workload results principally from a request from DCSLOG, in early 1982, that the division extend its monitoring and review of systems beyond the production milestone and through fielding. This request is a result of the Army's concern that the large number of systems now in production may not have adequate logistics support when they are fielded. The ILS Division has also been assigned ad hoc studies dealing with logistics supportability of systems in the Army's Force Modernization Program and the extent to which Army systems are relying on contractors for maintenance and support.

Because of its increasing responsibilities, the ILS Division, in 1982, established a method for prioritizing its review workload. Each system is now assigned a priority level of A, B, or C, with A representing the highest priority. The criteria for assigning the priority levels are somewhat flexible, but, in general, are as follows: (1) A systems are those designated as major, (2) B systems are those for which milestone decisions are made at the Deputy Chief of Staff for Research, Development and Acquisition level or other non-major systems which are judged vital to the readiness of combat units or to the support of combat equipment, or are high density items which impose a significant logistics burden on the Army, or are separately developed subsystems of priority A systems, and (3) C systems are all other systems. As of December 1982, the division had designated 44 A systems, 198 B systems, and 565 C systems.

As part of this prioritization of workload, the division specified the amount of effort to be devoted to each priority level. Priority A systems are receiving an increased level of effort, priority B systems are receiving the same level of effort as the division devoted to all systems in the past, and priority C systems are receiving a significantly reduced level of effort. Under the current guidance for priority C systems, action officers are to attend In Process Reviews only when necessary and other meetings, such as those of ILS management teams, test integration work groups and test scoring conferences, on an exception basis only. Also, they are to make only cursory reviews of, and comments on, documents provided by materiel and combat developers. They are not to solicit review of documents and input from functional specialists, analyze information on related fielded systems to use as a baseline for new systems, or visit test sites and demonstrations. ILS Division officials acknowledged that they may be missing opportunities to influence logistics planning for some non-major systems.

Need to update basis for estimating
personnel requirements

DCSLOG has stated that at current staffing levels the ILS Division is unable to accomplish all assigned functions. In 1981, the Army requested an additional 15 spaces for the division in its fiscal year 1983 budget request. However, this request was deleted during the Army budget review process. In November of 1981, DCSLOG submitted an out of budget cycle request for 15 new spaces, and in May of 1982, submitted a request for 17 new spaces as part of the fiscal year 1984 budget request. Both requests were denied during the Army budget process. DCSLOG has recently submitted a request for 15 additional staff as part of the fiscal year 1985 budget request.

We reviewed LEA's justification for the fiscal year 1985 staff increase and found that it was based largely on 1973 standards and 1981 workload levels. The scope of ILS planning has been increasing as more emphasis is placed on systems supportability. As a result, workload standards associated with ILS reviews in 1973 probably understate requirements today. In addition, since 1981, the ILS Division workload has expanded to include the monitoring of systems through fielding. Finally, the fiscal year 1985 request does not provide for the personnel needed to fulfill other division responsibilities such as on site monitoring of systems' tests and evaluations, and ILS force structure analyses.

While there does appear to be a mismatch between LEA's responsibilities and its staffing, the true magnitude of any shortfalls and their potential effects can not be accurately assessed until LEA updates its basis for estimating personnel requirements, taking into account the current scope of its ILS reviews and its other responsibilities.

DATA ARE UNAVAILABLE
OR INCOMPLETE

In many instances, the ILS Division makes ILS reviews before key information is available. For example, ILS reviews on major systems are often prepared before receiving and analyzing test reports and independent evaluations. In addition, for non-major systems where LEA functions as an IPR voting member, it does not always receive complete IPR packages. These conditions raise questions as to the value of LEA's reviews on those systems, and certainly reduce the overall efficiency of the process.

Test and evaluation reports are
not always available

Critical documents in ILS reviews of major systems include the final test report and independent evaluation report. The final test report contains the test results and compares those

results with the test objectives. The independent evaluation report is based, in part, on the test report and provides an assessment of the system's operational effectiveness.

Minimum ILS test and evaluation objectives include identifying materiel deficiencies which make maintenance difficult, as well as evaluating logistics related design goals, proposed staffing and skill requirements, transportability characteristics, training devices, and other logistics related matters.

We examined the reviews made at program decision points by the ILS Division on major systems in calendar years 1981 and 1982 and found that 10 of 12 reviews were made without final test reports or independent evaluation reports. When these documents are not available, the division will note this in the transmittal memorandum to DCSLOG. In two instances the division qualified its overall position on the system by stating that final test results could alter its position. When final test and evaluation reports are not available, action officers told us they attempt to work around this situation through informal contacts with test agency personnel. ILS Division personnel advised that in some cases this approach works but, in other cases, test agency personnel are reluctant to give out any information. In fact, an Army regulation on testing states that release of interim test data is discouraged in order to preclude any misinterpretation or other confusion concerning test results.

We did not attempt to determine conclusively why test reports and independent evaluations were not available so frequently, but we found some indication of the cause. In one system, the initial deployment date was advanced, which caused the milestone decision date to be rescheduled before completion of the system's testing. Our prior reports have also shown that acquisition milestone decisions are often made on major systems before final test results are prepared. This usually results from accelerating systems acquisition programs to meet critical fielding dates. A recent example is the M-1 tank.^{2/}

In situations where final test and evaluation reports are not available, for whatever reason, it appears reasonable that LEA should have access to whatever information is available at the time of their review. This would include interim test results.

Incomplete IPR packages

Army regulations require that IPR information packages be prepared and distributed at least one month prior to the IPR.

^{2/}"Logistics Planning For the M1 Tank: Implications For Reduced Readiness and Increased Support Costs" (PLRD-81-33).

The IPR packages are important because they contain much of the information used by IPR members when they decide whether the program should advance through the next milestone.

LEA's ILS Division action officers advised us that receipt of incomplete IPR packages is a frequent problem. Items cited by action officers and in correspondence as being missing included (1) basis of issue plans, (2) qualitative and quantitative personnel requirements, (3) test results, (4) maintenance plans, and (5) ILS plans. Further, our review of agency records for 20 of the 62 IPRs held from June through December, 1982, showed that 7 of the 20 IPR packages did not contain all the information required. Agency officials stated that in these situations, they usually attempt to get the missing data or documents from other sources or to work around the missing information. This requires additional work for the action officers in both locating and reconstructing the needed data.

RECOMMENDATIONS AND
FORMAL FOLLOW UP NEEDED

In order to be most effective a review process should not only identify problems for decision makers, but, where practical, should present solutions for those problems and provide a follow-up mechanism to assure that the problems are corrected in a timely fashion. Such procedures, in our view, would strengthen the usefulness of the logistic review process and, ultimately, the supportability of Army systems.

The reports resulting from LEA's preliminary reviews and DCSLOG's final reviews on major systems do not contain specific recommendations for correcting problems which they identify. Also, minutes from the decision review meetings do not routinely make recommendations on how logistics problems are to be resolved, specify who is responsible for their resolution, or set milestones for completion. We were told that, to the extent possible, logistics problems identified in the reviews are resolved prior to Army Systems Acquisition Review Council meetings and that agreed upon actions are informally monitored by DCSLOG personnel. Yet, when we talked to DCSLOG personnel responsible for monitoring, they stated that due to higher priority work they do not routinely follow up to determine if corrective actions are taken.

LEA's ILS Division review procedures for non-major systems also do not require that recommendations be developed. Again, we were informed that the parties usually try to resolve these problems prior to the IPR. However, when we reviewed the files for 20 systems for which IPRs were conducted during 1982, it was unclear how problems were addressed. ILS Division officials stated that action officers informally monitored actions being taken to correct the problems. However, action officers informed us that they devote little time to this activity.

SIGNIFICANCE OF PROBLEMS
SHOULD BE BETTER DEFINED

Until mid-1982 the LEA ILS Division logistics reviews assigned a risk level of high, moderate, or low to each ILS element. No formal criteria existed for making these assignments and risk levels tended to be largely based on the judgement of the action officer. In 1982, the division revised its risk level classification to red, amber and green and established a general definition for each risk level. Red indicates a significant problem with no solution identified or a solution being implemented--with less than satisfactory results projected by fielding date. Amber indicates a significant problem with solution expected by initial operational capability, or a minor problem with or without a solution. Green indicates that there are no problems. In our discussion with LEA officials, and in our review of available records, we found that the definition of a significant problem was still left largely to the interpretation of the action officer.

In our view, the LEA risk level classification would be of much more value to decision makers if there were a more precise definition of what constitutes a significant problem. In our opinion, the criteria are too general and the significance of a problem is subject to varying interpretations. As a minimum, we believe that significance should be more objectively related to the effect that the logistics problems will have on the system's operational readiness objectives, if not corrected. In this way, it would provide Army decision makers with a more objective basis for judging the criticality of the problem, and, for more critical deficiencies, it could provide the needed impetus to resolve them.