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Comptroller General
 OF THE UNITED STATES

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Need For A DOD Shelf-Life Program Administrator

Special attention is needed in the Department of Defense to see that shelf-life materials do not deteriorate in storage before they are issued for use. GAO identified inconsistent and inadequate management practices which demonstrate that the current lack of attention can result in excessive management costs or unnecessary disposal of material.

There needs to be one focal point--a DOD Shelf-Life Program Administrator--to review and evaluate the program on a continuing basis and to recommend actions to improve program management and eliminate inconsistent or wasteful practices.



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JUNE 19, 1979

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118765

The Honorable Jamie L. Whitten
Chairman, Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

H200300
George H. Mahon
In response to former Chairman Mahon's September 26, 1978, letter, we have reviewed the Department of Defense's shelf-life program.

During the House hearings on the Department's fiscal year 1979 appropriations request, a number of questions were raised concerning problems in the management of shelf-life material--material that deteriorates in storage within a limited time period. In response to these questions, the Deputy Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics testified that necessary management improvements have been or are being implemented. Mr. Mahon requested that we review the management of the shelf-life program to ensure that the improvements the Department's witnesses testified to have in fact been accomplished.

Recognizing the special nature of shelf-life material, the Department established formal guidance for shelf-life management in 1966. The overall objectives of the program are essentially to (1) establish controls which will assure the satisfactory inservice performance of shelf-life items and (2) minimize losses of shelf-life items due to shelf-life expiration.

Since 1974 the Secretary of Defense has delegated responsibility for Department-wide program administration to the Director, Defense Logistics Agency. However, each military service and the Defense Logistics Agency is responsible for managing its own shelf-life program.

We reviewed shelf-life management procedures and practices at various wholesale inventory control points. In addition, we interviewed cognizant officials in the Office of the Assistant Secretary of Defense, Manpower, Reserve Affairs and Logistics, and the Defense Logistics Agency.

The following is a summary of our observations. The appendix provides details on our findings and conclusions and on the scope of our review.

Inventory control points were not always performing independent technical evaluations of items entering their supply systems to determine whether shelf-life controls were necessary, nor were they routinely reevaluating shelf-life items to verify or adjust the original designations. We also found that shelf-life management practices were inconsistent between the Air Force and other military inventory control points and that the military services were not always preparing storage serviceability standards for the shelf-life items they managed. These inconsistencies and inadequacies can result in excessive management costs or unnecessary disposal of material.

There needs to be one focal point--a Department of Defense Shelf-Life Program Administrator--whose functions include reviewing and evaluating the operations of the program on a continuing basis and recommending actions to improve operations and/or eliminate inconsistent management practices.

In response to our earlier report, the Defense Logistics Analysis Office reviewed the Department's shelf-life program. The Office recommended in its September 1978 report that a shelf-life program focal point be established within the Defense Logistics Agency to provide Department-wide program management and evaluation.

We believe the Department should implement this recommendation as soon as possible. The proposed evaluation system would provide the necessary overall data to begin monitoring and evaluating the management of the shelf-life program, something that is not currently being done. In addition, establishing a shelf-life program focal point with specific responsibilities for program oversight should provide a basis for addressing and resolving the management problems discussed in this report and eliminating many of the inconsistencies that currently exist within the program.

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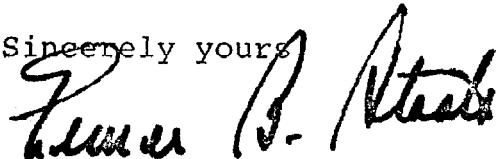
AGENCY COMMENTS

We discussed our findings and conclusions with Department officials. Office of the Assistant Secretary of Defense officials informed us that based on the findings of the Defense Logistics Analysis Office study and the information developed during our review, they have initiated action to implement the recommendations in the study. Specifically, they will direct the Defense Logistics Agency to appoint a Department of Defense Shelf-Life Program Administrator. Defense Logistics Agency officials expressed general concurrence in the study's recommendations. They will confer with the Office of the Assistant Secretary of Defense on any subsequent actions that need to be taken.

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As arranged with your office, we are making no further distribution of our report at this time. It will be released for distribution to interested parties in 30 days unless you publicly announce its contents earlier.

Sincerely yours



Comptroller General
of the United States

GAO REVIEW OFDOD'S SHELF-LIFE PROGRAM

During the House hearings on the Department of Defense's (DOD's) fiscal year 1979 appropriations request, a number of questions were raised concerning problems in DOD's management of shelf-life material--material that deteriorates in storage within a limited time period. In response to these questions, the Deputy Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics testified that necessary management improvements have been or are being implemented. On September 26, 1978, Mr. Mahon, Chairman, House Committee on Appropriations, asked us to review the management of the shelf-life program to ensure that the improvements DOD witnesses testified to have in fact been accomplished.

BACKGROUND

Shelf-life items are items of supply possessing deteriorative or unstable characteristics to the degree that a storage time period must be assigned; e.g., photographic film, paints, and rubber gaskets. Because of their deteriorative nature, shelf-life items require special management attention to assure that they are issued to users before their useful life expires.

Recognizing the special nature of shelf-life material, DOD established formal guidance for shelf-life management in 1966 with the publication of DOD Instruction 4140.27, Identification, Control, and Utilization of Shelf-Life Items. This instruction was revised and reissued in 1968 and 1974, and eventually was supplemented by the DOD Shelf-Life Management Manual, August 1976. The instruction and manual prescribe general policies and basic management procedures for the identification, control, and utilization of shelf-life material.

The overall objectives of the program are essentially to (1) establish controls which will assure the satisfactory inservice performance of shelf-life items and (2) minimize losses of shelf-life items due to shelf-life expiration. To this end, DOD directs inventory control points (ICPs) to

- identify items with deteriorative characteristics,
- assign codes indicating the length of shelf life,
- prescribe serviceability standards for items managed,
and

- periodically reevaluate shelf-life assignments and identify replacement items which do not require shelf-life control.

Since 1974 the Secretary of Defense has delegated responsibility for DOD-wide program administration to the Director, Defense Logistics Agency. However, each military service and the Defense Logistics Agency (DLA) is responsible for managing its own shelf-life program.

SCOPE OF REVIEW

During a prior review of DOD's shelf-life program, we concentrated on shelf-life management procedures and practices at various locations that stored the material. In our report (LCD-77-211, June 29, 1977), we pointed out that (1) Navy storage activities had not implemented satisfactory shelf-life management programs and (2) none of the storage activities we visited had adequate overall information on the shelf-life material that expired while in storage. We recommended that the Navy review shelf-life management at its storage activities to correct the deficiencies cited, and above all, that the Secretary of Defense establish a management reporting system as part of the shelf-life program.

In response to our report, the Defense Logistics Analysis Office studied DOD's shelf-life program to determine the feasibility of developing a management information and evaluation system. The Analysis Office issued its report in September 1978. In addition, the Navy is currently planning a servicewide audit of its shelf-life management.

Because of the recent work in the area, we limited our review to:

- Determining whether shelf-life management procedures and practices at the wholesale manager level are adequate to ensure that (1) new items entering the supply system are subjected to appropriate evaluation prior to designation for shelf-life management, (2) management records accurately reflect shelf-life identification data, and (3) items already in the supply system are subjected to subsequent reevaluation of shelf life, based on storage experience and other factors.
- Determining whether wholesale managers have made adequate progress in developing and disseminating

storage serviceability standards for the shelf-life items they manage.

- Examining the Air Force's practice of exempting non-Air Force managed items from shelf-life controls at Air Force installations.
- Determining the degree of program oversight and evaluation being exercised.

We interviewed cognizant officials in the Office of the Assistant Secretary of Defense, Manpower, Reserve Affairs and Logistics (OASD/MRA&L) and DLA. We obtained and analyzed statistical data from the Defense Logistics Services Center (DLSC) and Defense Property Disposal Service. We reviewed shelf-life management procedures and practices at the following ICPS:

- Air Force, San Antonio Air Logistics Center (SAALC).
- DLA, Defense Industrial Supply Center (DISC).
- Navy, Aviation Supply Office (ASO).
- Army, Armament Materiel Readiness Command (ARRCOM).

NEW ITEMS NOT ALWAYS SUBJECTED
TO INDEPENDENT TECHNICAL EVALUATION

At the four ICPS we reviewed, new items entering the supply system were not always subjected to an independent technical evaluation before being designated as shelf-life or non-shelf-life items.

Designating an item of supply as a shelf-life item sets in motion a series of management control procedures not usually associated with most supply items. Because these control procedures result in additional costs, DOD policy limits these designations to only those items with known or suspected deteriorative characteristics. Accordingly, it is DOD policy that a technical evaluation of a new item's instability or deteriorative characteristic be performed before the ICP designates it as a shelf-life item.

We found, in general, that new items of supply were identified by the contractor as deteriorative or nondeteriorative during provisioning (the process by which new items acquired to support a weapon system enter the supply system). In many cases, the contractor's recommendation of

an item's shelf life was accepted by the service with little or no independent technical evaluation by the ICP. In other cases, the new item was compared to other shelf-life items with similar characteristics. If the item was found to be similar, the ICP assigned the same shelf life to the new item.

To determine whether the four ICPs were identifying and evaluating items for shelf-life or non-shelf-life control, we attempted to evaluate the ICPs' technical reviews on 31 shelf-life items and 16 non-shelf-life items. From available technical data and discussions with the ICPs' technical specialists, we believe the designations of the non-shelf-life items in our sample were correct. We could not adequately evaluate the technical review process or the propriety of the shelf-life designations for some of the shelf-life items because of insufficient documentation. In those cases, we had to rely on discussions with responsible officials and on research done at our request.

Handwritten: [As a result of this work, we found that almost half of the shelf-life items reviewed had been assigned incorrect or questionable shelf-life designations. For three of the shelf-life items the original designations appeared incorrect; however, officials felt they were questionable enough that additional research was needed before a final decision could be made. Responsible officials agreed that 12 of the remaining 28 shelf-life designations were incorrect as shown in the following schedule.

ICP	Number of items reviewed	Original shelf-life designation		
		Incorrect	Questionable	Correct
SAALC	7	4	1	2
ARRCOM	13	5	2	6
ASO	6	3	0	3
DISC	5	0	0	5
Total	31	12	3	16

Because of time limitations, the number of shelf-life items we examined in detail was small compared to the total number of shelf-life items managed by these four ICPs. The intent of our review was not to determine the number of shelf-life items that were incorrectly coded; it was to evaluate the adequacy of procedures and practices used by ICPs to ensure proper shelf-life identification. Based on the results of our review, we do not believe they are.

The following discussions and examples describe situations we noted at the four ICPS.

SAALC

Items enter the Air Logistics Center's (ALC's) supply system primarily through the provisioning process. Items which are designated as shelf life during this process are generally identified as such by the provisioning team based on the manufacturer's recommendation. The provisioning teams rarely independently determine that an item should be managed as shelf life.

Two of the seven items we reviewed at SAALC were assigned shelf-life codes by the provisioning team for the F-15 aircraft. SAALC records showed that these two items, both rubber gaskets, had been assigned a 5-year non-extendible shelf life.

Research performed at our request by the SAALC technician responsible for these items revealed that gasket number 1 (NSN 5330-01-008-6067) was covered by a military standard for rubber products indicating that the shelf-life code was necessary. The technician could not find any technical data on gasket number 2 (NSN 5330-01-017-0035); however, he contacted the provisioning team to determine its justification for assigning the shelf life. The provisioning team stated that gasket number 2 had not been assigned a shelf-life code. The technician could not explain why this item was coded for shelf-life control when it entered San Antonio's supply system.

Since both gaskets were similar in nature, we asked about the coding of gasket number 1 when it originally entered the supply system. We learned that this item had indeed been assigned a shelf life. In explanation of this apparent contradiction, we were told that the first gasket was assigned a shelf-life code because early in the F-15 program the manufacturer was recommending that all gaskets have a shelf life, and the Air Force provisioning team was giving a "rubber stamp" acceptance to the contractor's recommendation. Later, when the second gasket entered the system, the Air Force decided that too many items were coming into the system with shelf-life codes. As a result, the provisioning team frequently changed the shelf-life codes recommended by the contractor to non-shelf-life codes.

According to a technician on the provisioning team there is little, if any, difference in the material used to make

these two gaskets and neither of the gaskets needed to be subjected to shelf-life controls. Based on our questions and the provisioning team's recommendation, SAALC officials are taking action to remove shelf-life controls for both gaskets.

ARRCOM

Shelf-life items entering ARRCOM's supply system are identified during the provisioning process. ARRCOM has not established specific procedures to be followed in the identification and evaluation of these items. In many cases, the shelf-life designation is based on advice from the item manufacturer and is accepted without a technical evaluation.

Our analysis of available documentation and our discussions with responsible technicians disclosed that the shelf-life designations for 7 of 13 ARRCOM-managed items were either unwarranted or questionable. In addition, the responsible ARRCOM technicians could not always justify or support the specific shelf lives assigned to the six items that appeared to be correctly classified.

One item we examined was a telescope mount (NSN 1240-01-037-7290). This was an "X" coded item, indicating that its shelf life exceeded 5 years. Upon reevaluation, the responsible equipment specialist informed us that designating this item for shelf-life controls had been a mistake because it did not contain radioactive material as originally believed.

Two other items in our review were a splined collar (NSN 1015-01-047-3392), an X coded item, and a core assembly (NSN 1090-01-007-2302) which was assigned a shelf life of 48 months. After reviewing the technical drawings for these items, the cognizant equipment specialists determined that both shelf-life designations were inappropriate because the items were made of steel and, therefore, would not deteriorate in storage.

ASO

New items enter ASO's supply system through the contractor provisioning process and ASO provisioning process. Under the contractor provisioning process, ASO's technical evaluation consists of a clerical review of contractor provisioning documents to make sure that shelf-life data are included when applicable. Technicians do not perform an indepth review of technical data and generally accept the contractor's shelf-life recommendation. When ASO provisions an item, it prepares

the provisioning documents. For items designated as shelf life, ASO reviews technical supporting data submitted by the contractor by comparing drawings and specifications with standards in military technical specifications.

In recent years, ASO has relied more and more on contractor provisioning. Therefore, the extent of technical review has diminished, while reliance on the contractor's recommendation regarding shelf life has increased.

At ASO, we examined the shelf-life designations of six items shown on the Navy List of Items Requiring Special Handling. This list is used throughout the Navy to identify items requiring shelf-life or other special handling procedures. We attempted to validate the assigned shelf-life designations by reviewing provisioning documentation and by discussions with ASO officials. These officials agreed that the shelf-life designations on three of the six items were improper and informed us that they would be deleted from the list.

None of the three items--two circuit card assemblies and a radio filter--contained deteriorative materials and, therefore, should not have been initially designated as shelf-life items.

DISC

New items enter DISC's supply system as a result of logistical transfers or a military service's supply support request. In either case, the military service assigns the shelf life.

To identify and select for validation those items designated as shelf life, DISC quality assurance specialists review a biweekly list of new items that have entered the system. For these items, the specialists obtain and review technical data, pertinent military handbooks, and specifications applicable to the items to validate the propriety of the shelf-life designations. If necessary, DISC contacts the manufacturers to identify the items' material composition.

We reviewed the justifications and technical evaluations for five DISC-managed shelf-life items. In each case, the shelf-life designations and shelf-life periods appeared appropriate and reasonable. However, we noted two situations which could significantly affect DISC's management of shelf-life items.

Quality assurance specialists make their technical

reviews only after DLSC has recorded the item's cataloging management data. When an item enters DISC's system, its service assigned cataloging data, including shelf-life coding, is registered in DLSC's Total Item Record. DLSC publishes this data throughout the DOD supply system. DISC stock control and supply depot records are also updated based on the DLSC output. It is only after this that DISC has a chance to validate the shelf-life data.

DISC officials said that 90 percent of the service-assigned shelf-life codes were wrong. Additionally, they said that there is inadequate technical data to verify these codes on nearly 50 percent of the items submitted. In some cases, they said that it may take from 3 to 6 months to obtain the technical data needed to correct the errors and request DLSC to recode the items. If DISC cannot obtain the needed data from the military service or manufacturer, DLSC recodes the items as non-shelf-life items. DISC officials told us that from 6 to 8 weeks pass from the time DLSC recodes the items and the time storage activities learn of the new codes. Until the new shelf-life codes are put into use, organizations stocking the items throughout DOD may be using incorrect shelf-life designations on which to base inventory management, quality assurance, and disposal decisions.

As stated previously, DISC assumes management of much of its material through logistical transfers. DISC has recently assumed management of a group of rubber or synthetic elastomer items which are used aboard nuclear submarines. These items were previously managed by the Navy's Ships Parts Control Center and the Navy, when agreeing to transfer management of these items, insisted that they be assigned 3-year shelf lives.

DISC officials informed us that these items make up a considerable number of their total shelf-life items and that they disagree with the mandatory 3-year designation insisted upon by the Navy. Their review of technical data shows that most of these items should have 5-year shelf lives, if any at all.

INCONSISTENCIES IN MANAGEMENT RECORDS

We found significant differences in the numbers of shelf-life items identified in quality assurance records and in stock control records and inconsistencies between codes used in stock control records.

LOD requires that controls be established at all supply echelons to ensure proper identification of shelf-life material on management records. It is essential that these records be accurate because management decisions such as buys, issues, inspections, and disposal depend on them.

We compared shelf-life identification data in quality assurance or cataloging records with data in the stock control records at the four ICPS. In most cases, the data were consistent; however, there were some inconsistencies in DISC and ARRCOM records.

DISC's Quality Assurance Division is responsible for updating all records containing shelf-life data to ensure compatibility. We attempted to determine the number of shelf-life items managed by DISC and found that it could be as low as 4,590 or as high as 5,796 and fall within as few as four Federal Supply Classes (FSCs) or as many as 19 FSCs. For example:

	Stock control records as of <u>12/31/78</u>	Quality assurance records as of <u>11/11/78</u>	Special report for GAO as of <u>1/1/79</u>
Items	4,590	5,424	5,796
FSCs	15	4	19

DISC was unaware of the inconsistencies in the above records and was unable to reconcile the differences. In the time available, we did not attempt to measure the adverse effect of the inaccuracies in these records. However, this effect could be serious since both types of records could affect important management decisions concerning such things as procurement quantity constraints, quality assurance scheduling, and disposals. Since both sets of records cannot be correct, DISC is taking action to investigate the causes for the inconsistencies and to correct its records.

ARRCOM stock control records contain a certain data element--the "source code"--that is required to be consistent with the shelf-life code. This code indicates whether or not an item has deteriorative characteristics. Of the 413 shelf-life items managed by ARRCOM, we found 243 instances where the source codes and the shelf-life codes were inconsistent. Again, time did not allow us to go into the effect of those inconsistencies; however, as in the case of DISC, they could be severe. When advised of this situation, ARRCOM officials said that they would randomly review their files to verify our findings. If the results so indicate,

a total review will be accomplished "as resources permit."

These inconsistencies and inaccuracies raise questions about the reliability of these records as a basis for accurate management decisions. Since the managing activities do not know, with certainty, which of their items are or are not shelf life, it is highly probable that storage activities receiving quality control direction from these managers do not know which of the items they store require shelf-life controls and which do not.

NO ROUTINE REEVALUATION
OF SHELF-LIFE DESIGNATIONS

In general, ICPs do not have formal programs to routinely reevaluate shelf-life items under their control subsequent to the items' original designations. Instead, reevaluations are made in response to complaints from storage activities or customers.

DOD requires ICPs to periodically reevaluate the shelf-life items they manage. According to this policy "such continuing reevaluations will be directed toward verification or adjustments of shelf-life types and codes and the identification of replacement items which do not require shelf-life type management." Storage activities are required to furnish ICPs data relative to shelf-life code assignments based on experience and observations. ICPs, in turn, should evaluate this quality feedback data in order to reduce, increase, or delete storage time control requirements.

At the ICPs reviewed, we found no evidence of formal programs to routinely collect and evaluate this type of data. However, shelf-life items were reevaluated on an exception basis. In these cases, ICPs reacted to individual complaints from customers or storage activities.

DISC is currently involved with other Government agencies and private industry in a reevaluation of the shelf life for O-rings made of a particular compound (Buna-N). DISC has found, among other things, that:

- Within DOD, military services disagree on the actual storage time limit for these items.
- Not all DISC-managed Buna-N O-rings are designated as shelf-life items, and DISC has not received any complaints from users.

According to DISC officials, eliminating this material from shelf-life controls would remove between 600 and 700 items from its shelf-life program. In addition, they believe shelf-life treatment for these O-rings is unnecessary and costs the Government about \$100,000 a year through disposal of O-rings whose recorded 5-year shelf life has expired. DISC officials believe these O-rings are usable for more than 5 years.

The need for periodic reevaluation is illustrated by the results of our review of the 31 shelf-life items previously discussed. The questionable or incorrect designations on the 15 items were discovered through reevaluations made by responsible technical specialists.

ALL ICPs HAVE NOT DEVELOPED STORAGE SERVICEABILITY STANDARDS

Not all of the ICPs we visited had developed storage serviceability standards for the shelf-life items they managed. In addition, problems in updating standards may result in improper storage of shelf-life material.

Storage serviceability standards are designed to provide storage activities specific information on type of storage, inspection, testing for an item, and the time phasing for these inspections during the storage cycle to determine the degree of deterioration that has occurred. They are applicable to all items of supply, and one standard may cover one or many items--shelf life and non-shelf life.

DOD requires each ICP to develop storage serviceability standards for the shelf-life items under its management. We found that ICPs were using a variety of techniques to direct storage activities on how to store, inspect, and test shelf-life items--including storage serviceability standards, shelf-life action codes, and technical orders. The development status and nature of these various techniques for each ICP visited are discussed below.

As of December 1978, 11 of ARRCOM's 413 shelf-life items were covered by storage serviceability standards. ARRCOM has been working, since March 1978, to provide coverage for all of its shelf-life items. Reasons cited for delays were lack of funds and personnel. Only one person was developing these standards.

According to ASO officials the Navy does not require the use of shelf-life item storage serviceability standards.

ASO relies on the shelf-life action code assigned to each item to direct proper inspection, test, and restoration of shelf-life material. However, these codes do not prescribe type of storage, such as temperature-controlled or humidity-controlled, nor do they instruct storage personnel how to determine the degree of deterioration that has occurred.

In about 1975, the Air Force eliminated the requirement for shelf-life storage serviceability standards because it believed its Technical Order system would provide adequate guidance. Under this system, the computer-generated Air Force stock list refers storage personnel to the applicable technical order governing each shelf-life item. However, these technical orders do not always include specific information for each item; e.g., time phasing of inspections for determining the degree of deterioration that has occurred.

DISC publishes storage serviceability standards for shelf-life and non-shelf-life items in DLA Manual 4155.5. Each supply center publishes standards for its items as an appendix to this manual. In addition to listing specific codes (i.e., type storage, inspection interval, etc.), the manual provides quality control techniques to be used in determining the condition of material in storage and actions to be taken for restoring material to issuable condition.

However, DISC realizes that it has some problems with this system. The annual update to the appendix, which is done manually, is time consuming as it requires the listing of each supply item and the verification of the applicable data. Consequently, much of the manual is continually out of date. Adding to this problem is the fact that DISC receives daily new shelf-life items into its system. As previously discussed, many of these items are erroneously coded, and correcting these codes may take 3 to 6 months. Consequently, supply center records and depot records are out of date and often incompatible. This could result in incorrect handling of material at the storage level.

INCONSISTENT SHELF-LIFE MANAGEMENT PRACTICES BETWEEN AIR FORCE AND OTHER ICPS

Manager and user practices regarding shelf-life designations are inconsistent. As a result, an item of supply may be subjected to shelf-life controls in some storage activities and not at others.

The Air Force follows a unique policy in that it exempts many items from shelf-life controls at its storage activities even though they have been designated as shelf-life items by the Army, Navy, or DLA inventory control point responsible for their wholesale level management. Therefore, these items are subjected to different storage, quality control, and disposal practices at Air Force activities than they are at other locations.

In 1974 the Air Force Audit Agency issued a series of reports pointing out that many items were managed as shelf-life items at Air Force storage activities even though no adverse effect, such as end-item failures, could be attributed to deterioration or shelf-life expiration of the items. As a result, the Air Force adopted its current policy that no items in an FSC will be subjected to shelf-life controls at its storage activities unless it is shown that deterioration of at least one item in the FSC had caused such an adverse effect.

Each Air Force ALC, in addition to its normal ICP functions for FSCs or items assigned to it for integrated management, has been given maintenance engineering management responsibilities for selected FSCs or items managed by other than Air Force ICPs. Under these responsibilities, each ALC implements the exemption policy. The managing ICP's shelf-life coding for the exempted items is retained in Air Force stock control records; however, their exempted status is published in Air Force Technical Order 00-20K-1.

At present, the San Antonio ALC has exempted 100 FSCs. To determine how the exemption process works, we selected items designated and managed as shelf-life items by ASO, DISC, and ARRCOM, but falling within the classes exempted by San Antonio. For 14 such exempted items, we reviewed the ALC's rationale for exemption and requested that the managing ICPs' justification for designating the items for shelf-life controls be reevaluated. As a result of these reevaluations, officials of the managing ICPs agreed that the shelf-life designations for nine items were incorrect and should be modified or deleted. The results of these reevaluations are summarized on the following page.

APPENDIX I

APPENDIX I

Managing ICP	No. of shelf- life items in sample	Original shelf-life designation	
		<u>Changed</u>	<u>Not changed</u>
ASO	6	a/4	2
ARRCOM	2	2	0
DISC	<u>6</u>	<u>3</u>	<u>3</u>
Total	<u>14</u>	<u>a/9</u>	<u>5</u>

a/Shelf-life codes of two ASO items were changed to designate shelf-life periods longer than originally assigned; shelf-life designations on all other items were totally removed.

In attempting to validate the ALC's justification for exempting the non-Air Force managed items in our sample, we learned that the ALC did not make a technical evaluation before items were exempted from shelf-life controls. Responsible officials at San Antonio explained that these items were exempted because the criteria discussed above for removal of the exemption--e.g., adverse effect caused by item deterioration--had not been met. Therefore, ALC personnel did not specifically document the justification for exemptions.

In validating the justifications for the shelf-life designations at ASO, ARRCOM, and DISC, we also inquired into the degree of coordination that takes place between these ICPs and the Air Force regarding the exemptions. None of the managers at the three ICPs were aware of the exemption policy. In general, they maintained that a technical evaluation of an item's composition and deteriorative characteristics would be needed to legitimately exempt an item from shelf-life management. However, they also agreed that the exemptions, even though not based on technical evaluations, had been correct in 7 of the 14 cases sampled. In two other cases, these managers agreed that the original shelf-life designations should be modified.

For example, ASO had assigned a 4-year shelf life to a support assembly (NSN 2915-00-098-3820), which had been exempted by the ALC. As a result of the reevaluations, ASO extended the item's shelf life from 4 to 5 years.

Discussions with the item manager at ASO disclosed that about 1,300 of these assemblies, valued at about \$17,500, had been disposed of in 1976 because the incorrect 4-year shelf life had expired. At the time of our visit, the San Antonio ALC had onhand 29 of these assemblies with expired shelf lives. The ALC regarded the assemblies as being in serviceable condition and intended to issue them for use.

In an attempt to judge whether the exemptions had resulted in deterioration of the items, we inspected four exempted items in storage at San Antonio. We found no apparent deterioration. However, we found that in three of the four cases, storage personnel were not complying with the ALC exemptions, but were observing the shelf-life designations assigned by the managing ICP, which was ASO. In two of these three instances, assets had recently been reclassified from a serviceable to an unsuitable-for-use condition because the ASO-assigned shelf life had expired.

We performed a very limited amount of additional research to see if other similar condition reclassifications had occurred for other shelf-life items intended to be exempted by the ALC. We noted that such reclassifications had taken place for eight line items, including the two mentioned above. For these 8 items, a total of 684 assets had been reclassified from serviceable to unsuitable for use due to shelf-life expiration. When we brought this situation to the attention of ALC officials, the officials confirmed their intention not to observe the shelf-life designations assigned by the other ICPs and took action to have the 684 assets, valued at \$76,804, reclassified as serviceable so that they could be issued for use.

Obviously, where there are inconsistencies, the manager and user cannot both be correct in regard to any one item. If the manager is right, users that do not manage items according to the assigned shelf life are risking higher equipment deadline rates and more costly maintenance. If the user is right, as the Air Force appears to be on many of the exempted items we examined, other activities are spending too much to manage the items according to the assigned shelf life and may be disposing of usable material unnecessarily.

LACK OF DOD-WIDE PROGRAM
OVERSIGHT AND EVALUATION

Within OASD/MRA&L, the Director for Supply Management Policy is responsible for the DOD shelf-life program. According to OASD officials, they develop the direction and policy and depend on the military services to comply. OASD does not perform any overall evaluation of the program to determine how effectively it is operating nor does it accumulate management data (i.e., costs, inventory value, and disposals), as it does not require the services to report this type of data.

Since 1974 the Director, DLA, has been responsible for the overall administration of the DOD shelf-life program. However, no office or person in DLA has been designated as the shelf-life administrator to carry out oversight of the program's effectiveness. DLA does not monitor or control the military services implementation of shelf-life program policies and procedures nor does it evaluate their management. In addition, DLA does not have a formal system to evaluate shelf-life management at its own supply centers, nor does it accumulate data on costs attributable to shelf-life management at these centers.

One of the primary goals of DOD's shelf-life program is to minimize the risk of shelf-life expiration prior to issuance. As pointed out in our report (LCD-77-211, June 29, 1977), DOD presently has no way of knowing how much material is disposed of due to expiration.

In response to that report, the Defense Logistics Analysis Office studied DOD's shelf-life program to determine the feasibility of developing a management information and evaluation system. In its September 1978 report, the Analysis Office concluded that, using existing DOD information collection systems and the data base and methodology it developed, shelf-life program evaluation could be performed with a relatively small amount of effort and at a very low cost.

We attempted to develop data on DOD shelf-life disposals for fiscal year 1978 by using disposal data provided by the Defense Property Disposal Service and DLSC cataloging data. Our evaluation was limited to the 1.4 million disposal transactions for which we had complete data. We found the following:

Material managed by	Shelf-life disposals			
	Total disposals	Total	Shelf-life consumable	Shelf-life nonconsumable
-----in millions-----				
All ICPS	<u>\$3,600.2</u>	<u>\$80.3</u>	<u>\$31.7</u>	<u>\$48.6</u>
ICPS reviewed:				
ASU	399.6	24.5	4.3	21.2
LISC	94.4	.3	.3	0
ARRCOM	191.9	.5	.5	0
SAALC	159.7	2.3	2.2	.1

Under current DOD data collection systems, it is not possible to determine how much of the \$80.3 million of shelf-life disposals resulted because shelf-life material expired in storage. By their nature, non-consumable shelf-life items are intensively managed and, therefore, would probably have been disposed of for reasons other than expiration of shelf life. On the other hand, consumable items are not as intensively managed, therefore, it is probable that some of the \$31.7 million resulted because the shelf life expired before it was issued or used.

Definitive data on disposals due to expiration of shelf life could be accumulated by the Disposal Service as part of a program evaluation data base. DOD requires that shelf-life material be identified on disposal documents by shelf-life condition code and expiration/test date. The Disposal Service has the capability of identifying this material through a system of special handling codes which define the remaining shelf life on an item. By adding a special handling code to identify disposals due to shelf-life expiration, the Disposal Service could accumulate this data for management use by the Shelf-Life Program Administrator. In turn, the Administrator could identify potential problems at ICPS or storage activities.

CONCLUSIONS

Since 1974 DLA has been assigned formal responsibility for administering the DOD shelf-life program. However, it has not carried out this responsibility effectively.

There is no overall control or evaluation of DOD's shelf-life program. ICPS are not always performing independent

technical evaluations of items entering their supply systems to determine whether shelf-life controls are necessary. ICPs are not routinely reevaluating shelf-life items under their management to verify or adjust the original designations. The Air Force and other ICPs have inconsistent shelf-life management practices. The military services are not always preparing storage serviceability standards for the shelf-life items they manage. These inconsistencies and inadequacies can result in excessive management costs or unnecessary disposal of material.

There needs to be one focal point--a DOD Shelf-Life Program Administrator--whose functions include reviewing and evaluating the operations of the program on a continuing basis and recommending actions to improve operations and to eliminate inconsistent management practices.

In September 1978, based on its review of DOD's shelf-life program, the Defense Logistics Analysis Office recommended that DLA's charter be expanded to include specific functions regarding shelf-life item management for DOD. For example:

- Review and evaluate the operations of the DOD shelf-life item management program on a continuing basis.
- Periodically, at least annually, provide a DOD shelf-life item management program evaluation report to OASD (MRA&L).
- Recommend shelf-life item management policy and procedural changes, as required.

In addition, it recommended that DLA establish a shelf-life item management program focal point for carrying out these functions, especially with regard to developing and maintaining the program data base proposed by the Analysis Office.

We believe DOD should implement these recommendations as soon as possible. The proposed evaluation system would provide the necessary overall data to begin monitoring and evaluating the management of the shelf-life program; something that is not currently being done. In addition, establishing a shelf-life program focal point with specific responsibilities for program oversight should provide a basis for addressing and resolving the management problems discussed in this report and eliminating many of the inconsistencies that currently exist within the program concerning such

matters as, what constitutes adequate technical evaluation of a shelf-life item; what constitutes adequate storage serviceability standards; and under what, if any, circumstances an item can be exempted from shelf-life controls.

AGENCY COMMENTS

We discussed our findings and conclusions with OASD and DLA officials. OASD officials informed us that based on the Analysis Office study and the information developed during our review, they have initiated action to implement the Analysis Office's recommendations. Specifically, they will direct DLA to appoint a DOD Shelf-Life Program Administrator. DLA officials expressed general concurrence in the study's recommendations. They will confer with OASD officials on any subsequent actions that need to be taken.

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