

ICBS-R Expired Items Tracking Requirements



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ICBS-R Expired Items Requirements

The ICBS-R “Expired Items Task Group” was given the assignment of investigating and making recommendations on how the re-engineered application should enable cache personnel to manage date-dependent items. The following document is the Task Group’s proposal in its entirety.

The Task Group recommends a “fully automated approach” to the three areas of: Physical Storage, Identifying and Tracking, and Reporting and Analysis (please see page 10). The ICBS-R Core Team reviewed the Task Group’s proposal and accepted its recommendations. We made just one addition to the document in order to capture the scenario of supply items having components of varying expiration/inspection dates (on page 6 please see the third paragraph, which is underlined).

The ICBS-R Core Team sees this document as a good foundation for the detailed system design and development work ahead. We expect the vendor team, with its vast supply chain and warehouse expertise, to suggest alternative automated approaches for managing this type of supply item in the most efficient manner, and to suggest solutions for any other areas that we might have overlooked. The ICBS-R SMEs will work collaboratively with the system developers to arrive at the best automated approach for the NFES cache system in each of the three areas identified by the Task Group.

Business Requirements

The expired items task group has identified the following business requirements regarding the handling of shelf-life items and other date-dependent NFES items within the national caches. These requirements are based on direction given by the USDA Office of Inspector General (OIG), National Fire Equipment System (NFES) and public law. In addition, the requirements provide for more effective and efficient use of supplies throughout the NFES system.

Physical Storage

- a. Identify NFES items that have expiration dates and/or test dates and inspection dates by marking items, packaging or storage areas so that items can be clearly picked by specified dates manually or within an automated system.
- b. Establish an item picking rule for the cache warehouse. (i.e. FIFO, LIFO¹ or other user-defined methods)
- c. Implement the cache’s warehouse item picking rule.

¹ FIFO = First In First Out; LIFO = Last In First Out

Identifying and Tracking

- a. Identify the quantity of an item received by expiration dates and/or test dates and inspection dates manually or within an automated inventory system.
- b. Implement the cache's defined picking rule when creating and posting an issue.
- c. Identify the quantity of an item returned by expiration, test or inspection dates manually or within an automated inventory system.

Reporting and Analysis

- a. Produce a report that easily identifies items that are about to expire. Report should include the NFES item, quantity and date of expiration for all or selected NFES items by a specified date or date range.
- b. Produce a report that easily identifies items that require testing. Report should include the NFES item, quantity and date of test for all or selected NFES items by a specified date or date range.
- c. Produce a report that easily identifies items that require an inspection. Report should include the NFES item, quantity and date of inspection for all or selected NFES items by a specified date or date range.
- d. Ability for National Supply Cache Coordinator to consider the best utilization of pending expiration items within the national cache system.

Background

Oversight and Direction

OIG Audit Report No. 08801-13, dated March 2000, Recommendations 3 and 4

The establishment of controls to dispose and replace several different expired NFES items was recommended to the Forest Service by a March 2000 Office of Inspector General report. While the national caches have initiated some actions regarding expired meals and medications, the NFES caches do not have a standardized or integrated procedure to do so. Specifically, the successful control of quantities of Meals Ready to Eat (MREs) and first aid kit medications is significantly compromised by the lack of a clearly defined procedure. In addition, the current Interagency Cache Business System (ICBS) application does not support tracking specific expiration dates for quantities of NFES items.

National Wildfire Coordinating Group (NWCG)

Additional direction for the expiration, testing and inspection of supplies and equipment by the national caches is established in the NWCG Fire Equipment Storage and Refurbishing Standards.

Public Contracts and Property Management regulation Title 41 CFR 102-36.450

The regulation states “when there are quantities (of excess shelf life items) that would not be utilized by the expiration date ..., you must report such expected overage...for possible transfer and disposal...prior to deterioration. Section 102-36.460 further directs “when the remaining shelf life of any medical materials ...held for national emergency purposes are of too short a period to justify their ...retention, you should report such property...for possible transfer and disposal”.

Current Interagency Cache Business System (ICBS) Capability

Items are identified in the current ICBS application by their NFES number. Items with an expiration or shelf life date such as MREs, batteries, and medications are not identified individually by the application. The ICBS inventory tracks only the quantities for each NFES item. For example, at any given point in time the ICBS application user can only determine that there are 4,000 packages of NFES 0030 AA batteries ready for issue at Prescott Fire Cache storage location B.

The ICBS item catalog has an optional field for each NFES item labeled “Expired.” If this field is checked, that indicates the NFES item has an expiration date. Since shelf life items are not tracked individually, the current system does not allow recording actual expiration dates.

It should be noted that accountable or “trackable” NFES items such as pumps, chain saws and generators are assigned property numbers and are tracked individually within ICBS. This equipment can have individually assigned test dates.

Other non-accountable NFES such as fire extinguishers and propane tanks located in the ICBS item catalog have inspection dates dictated by regulation or manufacturer direction. ICBS does not currently distinguish items by inspect or test dates.

Publications, such as handbooks, guides and forms, may also be date marked. The NFES items are periodically reviewed and can be revised. At this time, ICBS does not distinguish items by revision dates. The item catalog in ICBS presently includes the date of these materials.

The NFES first aid kits and other national kits contain items that could have different expiration (and inspect/test) dates. The supplies may have national NFES numbers or local NFES numbers assigned. ICBS does not currently distinguish the items by expiration dates but the current warehouse process is to create a label listing the item(s) by NFES number and expiration date that is affixed to the outside of the container.

ICBS has a report called “Expired Items.” This report produces a list of NFES items that can have an expiration date. The items reported are selected from the item catalog where the “Expired” value is checked. The only utility of this report is to give the user a list of items that could have expired. Other paper forms or manual inspection of items would be required to know the actual expiration dates and quantities for any of the items.

During the ICBS-R field visits in 2004, 4 of the 19 caches visited reported that they utilized the ICBS expired items report. One other cache used the InPro Trak program that has a shelf life field in the stores catalog number screen. The shelf life value is marked “Y” or “N”. The shelf life information is compiled and used to produce a report in MS Word. Other paper forms and visual inspection of items would be required to determine the actual shelf life dates and quantities of any of the items.

Cache Expired Item Handling Procedures

Expired Items Clarification Responses-

Ten of the eleven responding caches indicated they were meeting OIG recommendations to follow established standards for inspecting MREs and first aid kits. Four replied that they utilized the ICBS Inventory/Item Expiration report. Slightly over half of the caches answered positive to having an operational need to identify and track supplies with test or inspection dates.

Per the questionnaire, the NFES caches identify and report shelf life items in several different ways.

Expired Items Physical Storage methods included:

1. Placarding storage locations
2. Using first in, first out stock picking procedure

Expired Items Identification and Tracking methods included:

1. Remarking dates on item containers or their labels
2. Creating separate packaging expiration date labels
3. Visually inspecting the manufacturer's expiration date on the container
4. Hand written receipt form

Expired Items reporting methods included:

1. Handwriting notations on ICBS kit packing lists
2. Utilizing the ICBS Item Expiration Report
3. Creating cache specific forms or reports

Options to Meet Business Requirements

The following tables provide options this task group has explored for meeting the general categories of business requirements defined at the beginning of the document.

Physical Storage

| Option | Advantages | Disadvantages |
|---|---|--|
| A. Manually identify items, item packaging or storage locations | <ul style="list-style-type: none"> -Does not require automation investment -No automation training required -No automated data input workload -Fully operational without technology | <ul style="list-style-type: none"> -Labor intensive Increased user time & error rate -May require multiple labels or signing -Not consistent with any existing automated systems |
| B. Automate item identification, item packaging or storage location | <ul style="list-style-type: none"> -Reduced user time and error rate -Reduces data input time and errors -May be integrated with existing automation | <ul style="list-style-type: none"> -Requires automation Investment -Additional training needed |
| C. Establish and implement a stock picking rule (e.g. first in, first out). | <ul style="list-style-type: none"> -Consistent with accepted warehousing industry procedures -Defines a common way to do business -Helps to ensure oldest stock is used first -Can be implemented with a manual or automated system | <ul style="list-style-type: none"> -Additional training needed -Requires standard operating procedure documentation -Reduces stock picking options |

Identifying and Tracking

| Option | Advantages | Disadvantages |
|---|--|--|
| A. Manually record on a paper form. | <ul style="list-style-type: none"> - Does not require automation investment - No automation training required. - No automated data input workload - Fully operational without technology | <ul style="list-style-type: none"> - May require multiple handwritten forms - Subject to written errors and/or information alterations - Not consistent with any existing automated business systems - Can require extensive physical labor |
| B. Use automated program outside of ICBS-R such as a spreadsheet or commercial warehouse package. | <ul style="list-style-type: none"> - Establishes a consistent procedure - Potential error reduction due to system generated tracking - Can standardize expired items processing - Potential to interface with supplier systems - Could use AIT to scan date information | <ul style="list-style-type: none"> - Significant technological investment or purchase cost - Technological training required. - Program user support required - May not interface with supplier systems - Two systems to support and provide training |
| C. Use ICBS program with current functionality in combination with options A or B. | <ul style="list-style-type: none"> - No additional technological investment needed - Does identify the expired item's NFES number - Does report the expired item's NFES number - Is a response to OIG direction. | <ul style="list-style-type: none"> - Requires non automated identification and reporting - Does not identify the date or quantities of NFES expired items - Does not track the date or quantities of NFES expired items - Does not report the date or quantities of NFES expired items - May not be an adequate response to OIG direction |
| D. Use ICBS program with modified functionality so that item quantities can be tracked down to the Unit of Issue by expiration date or test date. | <ul style="list-style-type: none"> - Similar categories of items already identified - Assists in establishing a unified standard - Re-engineering project already active - Could use AIT to scan date information | <ul style="list-style-type: none"> - Cost of program modifications - Expanded system support and training requirements. - Small percentage of inventory involved |

Reporting and Analysis

| Option | Advantages | Disadvantages |
|-----------------------------|--|--|
| A. Manually produce reports | -No automation investment | -Labor intensive -Increased error rate -Not consistent with any automated systems in use |
| B. Automate reporting | -Reduced labor to produce reports -Reduced error rate -Single point access capability for -National Supply Cache Coordinator | -Cost of program modifications -Small percentage of inventory involved |

Existing commercial applications

- A Kmart Distribution Center, Ontario, CA utilizes the 3M Company software system “High Jump” to track its perishable goods. Goods are received and shipped using a FIFO process with the goods marked with a receipt date and then placed into an active picking slot. The center manager reviews the 90 days and 120 day perishable tracking report daily.
- GSA, Ft. Worth, TX is planning to utilize 3M Company software called Highjump in a California warehouse to track expired items. Items are date marked and additionally expiration date marked as appropriate.
- Ace Hardware Distribution Center, Prescott Valley, AZ utilizes a TSO brand software that during purchase order receipting generates Julian date marked labels for all products. Expired items are additionally manually labeled and placed on the shelf. First in, first out is automatically reflected on an electronic order picking list. An employee may “sight” or bypass pick.

Recommended Business Requirements Options

Based on a review of the federal direction and the stated cache business practices, the current procedures of controlling quantities of NFES supplies with expiration dates, as well as test date and inspection date items, are inconsistent. Although the majority of both national and local area caches reported that they are adequately following directions about controlling expired MREs and first aid kit components, the procedures used vary throughout the national cache system.

The standards used to identify storage locations, individual NFES items and associated quantities, track and report date sensitive items not only varies within the cache system but is a mixed manual and existing automated system.

From storage to the reporting of date sensitive NFES supplies, associating actual dates with specific item quantities would be the most efficient method to establish shelf life controls. By automating shelf life management procedures throughout the item life cycle, the national caches could fully control expired items. The use of inventory control automation would further more effectively allow the national cache system to meet applicable federal regulation and direction.

The Expired Items Task Group recommends a fully automated approach to date-dependent items and proposes the following for ICBS-R:

- Physical Storage options B (Automate item identification, item packaging or storage location) and C (Establish and implement a stock picking rule [e.g. first in, first out])
- Identifying and Tracking option D (Use ICBS program with modified functionality so that item quantities can be tracked down to the Unit of Issue by expiration date or test date)
- Reporting and Analysis option B (Automate reporting).

Appendix A – Date-Dependent NFES Items

* Publication and local NFES numbers not included

| NFES Number | Item Description | Date Dependent Action | Comments |
|-------------|---------------------------|-----------------------|-------------------------------|
| 0030 | Battery, AA | expiration | |
| 0031 | Battery, general | expiration | |
| 0033 | Battery, general | expiration | |
| 0067 | Kit first aid | expiration | various medications |
| 0071 | Tape, duct | inspect | |
| 0124 | Pump, lightweight | test | one year from last use |
| 0148 | Pump, fire | test | one year from last use |
| 0159 | Chainsaw | test | one year from last use |
| 0206 | Towel, waterless | expiration | |
| 0208 | Soap | inspect | |
| 0222 | Tape, filament | inspect | |
| 0253 | Pump, fire | test | one year from last use |
| 0270 | Kit, air operations | expiration | 1258,0030,0834,0307,0222 |
| 0288 | Clock, digital | expiration | contains 0030 |
| 0307 | Extinguisher | inspect | one year from last inspection |
| 0320 | Kit, incident base maint. | inspect | contains 0071 |
| 0340 | Kit, chainsaw | test | contains 0159 chainsaw |
| 0365 | Pen, nylon tip | test | |
| 0366 | Pen, nylon tip | test | |
| 0367 | Pen, nylon tip | test | |
| 0390 | Kit, finance | expiration | contains 0030, 0033,0288 |
| 0395 | Tape, plastic | inspect | |
| 0396 | Tape plastic | inspect | |
| 0447 | Pen, ballpoint | inspect | |
| 0480 | Kit, coffee heating | inspect | contains 0491 tank |
| 0491 | Tank, propane | test | requelified every 12 years |
| 0520 | Kit, helicopter support | inspect/test/exp | contains 3520,3521,3522 |
| 0528 | Lead line, helicopter | test | each five years |
| 0619 | Tape, electrical | inspect | |
| 0650 | Kit, evacuation | expiration | contains 0030,3008,1604 |
| 0670 | Kit, pump | test | contains 0124 |
| 0683 | Pump, volume | test | |
| 0696 | Light disc | expiration | |
| 0698 | Light disc | expiration | |
| 0699 | Light disc | expiration | |
| 0701 | Light disc | expiration | |
| 0705 | Repellent, | expiration | |
| 0709 | Generator, gasoline | test | one year from last use |
| 0760 | Kit, office supplies | inspect | contains various items |

| | | | |
|------|--------------------------|--------------------|------------------------------|
| 0768 | Marker, Felt tip 3 color | inspect | |
| 0770 | Tape, masking | inspect | |
| 0775 | Calendar | expiration | |
| 0800 | Kit, planning | expiration | contains 0030,0033,0288 |
| 0834 | Battery, general | expiration | |
| 0849 | Long line | test | |
| 0870 | Kit, pump | test | contains 0148 |
| 0910 | Kit, logistics | expiration | contains 0030, 0033, 0288 |
| 0966 | Hose, cotton synthetic | test/ inspect | |
| 0967 | Hose, cotton synthetic | test/ inspect | |
| 1023 | Battery radio | expiration | |
| 1039 | Highlighters | inspect | |
| 1051 | Pad, Post-it-note | inspect | |
| 1073 | Marker | inspection | |
| 1117 | Foot Powder | expiration | |
| 1143 | Kit, first aid | expiration | |
| 1203 | Battery , radio | expiration | |
| 1222 | Pump, volume | test | one year from last use |
| 1233 | Battery, radio | expiration | |
| 1241 | Battery, 9 volt | expiration | |
| 1258 | Battery, general | expiration | |
| 1309 | Kit, long line | test | contains 0849 |
| 1604 | Kit, first aid | expiration | |
| 1727 | Kit, first aid | expiration/inspect | various meds, oxygen bottle |
| 1728 | Kit, first aid | inspect | oxygen bottle |
| 1760 | Kit, first aid | expiration | various meds |
| 1835 | Kit, first aid | expiration | various meds |
| 1842 | Food, MRE's | inspect | |
| 2069 | Kit, van | test/inspect/exp. | contains multiple sub kits |
| 2545 | Marker, felt tip black | inspect | |
| 2546 | Marker, felt tip blue | inspect | |
| 2547 | Marker, felt tip red | inspect | |
| 3007 | Light stick | expiration | |
| 3008 | Light stick | expiration | |
| 3009 | Light stick | expiration | |
| 3520 | Kit, accessory | expiration | contains 0030,0033,0307,1604 |
| 3521 | Kit, form pack | expiration | contains 0447, 0288 |
| 3522 | Kit, net assembly | test | contains 0528 |
| 4244 | Kit, logistics radio | expiration | contains 0030 |
| 4248 | Kit, logistics repeater | expiration | contains 1023 |
| 4253 | Kit, UHF link | expiration | contains 1023 |
| 4281 | Kit, cross band link | expiration | contains 1023 |
| 4300 | Kit, ground VHF-AM | expiration | contains 1023 |
| 4312 | Kit, command repeater | expiration | contains 1023 |
| 4330 | Kit, remote | expiration | contains 1023, 1233 |

| | | | |
|------|-----------------------|------------|-------------------------------|
| 4381 | Kit, command/tactical | expiration | contains sub kits w/0030 |
| 4390 | Kit, starter system | expiration | contains sub kits w/0030,1023 |
| 4410 | Kit, public address | expiration | contains 1233 |
| 6041 | Kit, pump, volume | test | contains 1222 |