

# MARS User Guide

# The Match Process

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United States Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Office of the CIO



## Match Process

Document Revision 2.0

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### **Match Process Overview**

The "Match" is an automated process that matches CBS data with MARS commitment data. Following are the steps involved in the Match process:

**Parameter Setup** - Establish parameters that will determine how CBS transactions will be matched to MARS commitment records.

**Run Automatic Match and Obligation** – Every day the match is be run for all new CBS transactions.

**Verification** - The system will validate the data that is downloaded from CBS and ignore specific transactions.

**Automatic Obligation Process** – The system will automatically create a new commitment record or update an existing commitment record if the transaction matches the Automatic Obligation parameter.

**Automatic Match Process** – The system will search for a commitment. If a commitment is found that matches the parameter criteria, the commitment amount is increased and the remaining commitment amount is decreased.

**Manual Match** – If no match is found, the transactions are displayed in a General Match Error Report. The user must reconcile the transaction by creating a new commitment or manually match the CBS obligation to an existing commitment.

### ***Getting Started***

At the beginning of the fiscal year, each MARS FMC Administrator is responsible for establishing and populating the initial match parameter tables. The parameter tables are completed before the system becomes operational. Once the parameter tables have been established, it is best not to change them for the remaining fiscal year. Keeping consistent parameters will prevent mixed data in the files. On a daily basis the match will be run and automatically update MARS with the most current CBS Trans data.

### **Match Process**

Every day the CBS data will automatically be downloaded so that the match can be run for all new CBS transactions. The match routine can be run at any time by the individual match analysts.

For every CBS download:

The Match is run.

The FAST Report Table is refreshed.

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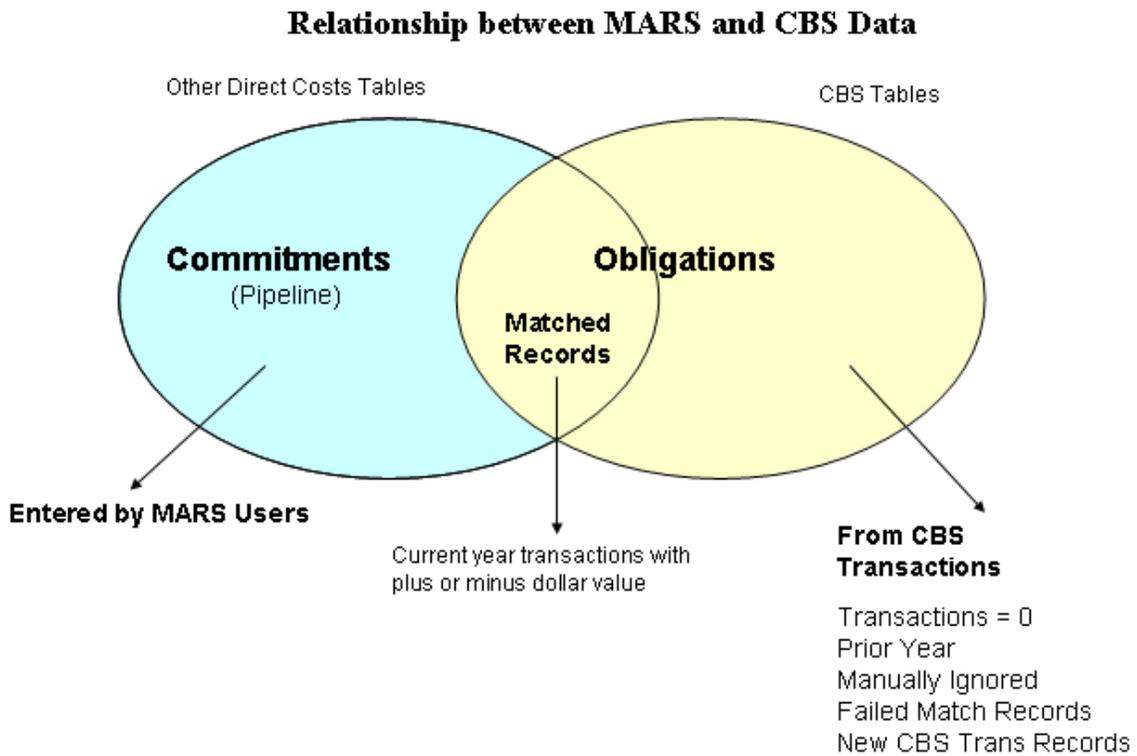
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Travel Commitments are generated.  
Auto Ob Commitments are generated.

The Match routine runs on current fiscal year documents. All zero dollar amount records are ignored during the Match routine and can be viewed in the AP\_Trans table through the Browse feature. Prior Year records are not processed through the Match, but are available in the Forms and Reports.

The following diagram shows the relationship between the MARS and CBS data and what fields are common to both and what fields are unique to the MARS system.

### Relationship Diagram



## **Differences Between MARS and CBS Records**

### Fields Common to Commitments and CBS

FMC  
FY  
Document Type / Item Type  
Organization Code  
Project / Task Code  
Object Class

### Fields Unique to Commitments

Description  
Name/COTR  
Remarks  
Requisition Number  
Commitment Amount  
Vendor  
CBS amount  
Pipeline

### Fields Unique to CBS

Undelivered Orders  
Accounts Payable (unpaid Accrued)  
Disbursements (Paid Accrued)  
Receipts

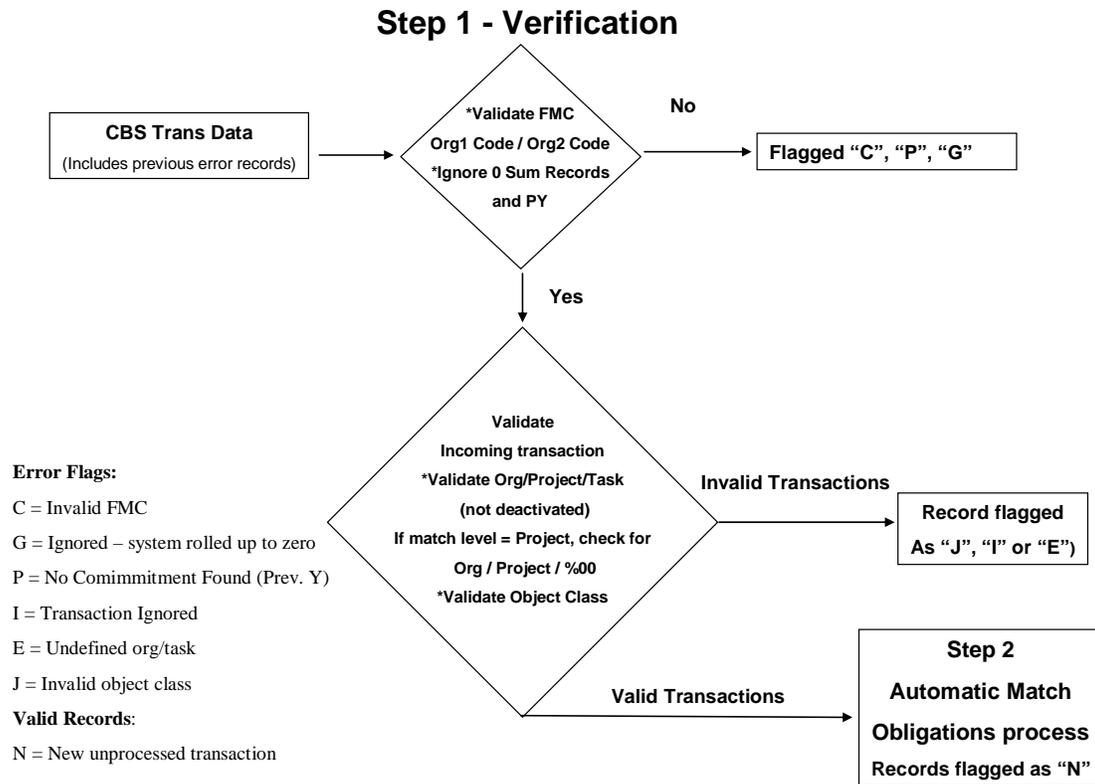
## **Correcting the Errors**

The ***Automatic Match/Obligation*** process will work only to the level of the parameters entered and the level of effort put forth to correct the match errors. It is highly recommended that this process be completed as soon as the data becomes available to minimize the volume of data that must be processed. The match is a multi step process. The user must initiate the Match process as well as correct any errors that may have occurred (MARS and/or CBS errors).

Once the ***Automatic Obligation/Match*** is executed and reconciliation is not made, records in the CBS transaction files are rejected and placed in a ***Match Error Report***. The user will then have to perform some analysis on the transactions to identify the correct course of action to reconcile the unmatched transactions.

## Match Process Diagram

### Step 1 - Verification



The Match Process performs the following processes in Step 1:

- Flag and ignore all records that have Zero amounts.
- Only records for the current Fiscal year (as defined in the Parameter table).
- Process all records previously rejected because of any error and try to process it again.
- Validate the Org/Project/Task at the 10 digit level where the Org/Project/Task is on the OPT table and is not deactivated.
- If no record is found at the 10 digit level and the 7 digit level flag is set it will then check the Org/Project/Task at the 7 digit level plus a 'P00' task. Org/Project/Task must be on the OPT table and not deactivated.
- Validate the Org/Project/Task using the Match Org/Project/Task translation table at the 10 digit level. Org/Project/Task must be on the OPT table and not deactivated.

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- If no record is found at the 10 digit level and the 7 digit level flag is set it will then check the translated Org/Project/Task at the 7 digit level plus a 'P00' task. Org/Project/Task must be on the OPT table and not deactivated.
- Validate all Object classes using the object class table.
- Ignore duplicate records that total zero. Basically this is the process that will exclude invalid commitments and the CBS correction. These records are not included in the counts on the processing screen so you may not be able to reconcile against your error report.
  - Users with access can use the Ignore CBS transactions process to back out ignored records or include additional records.

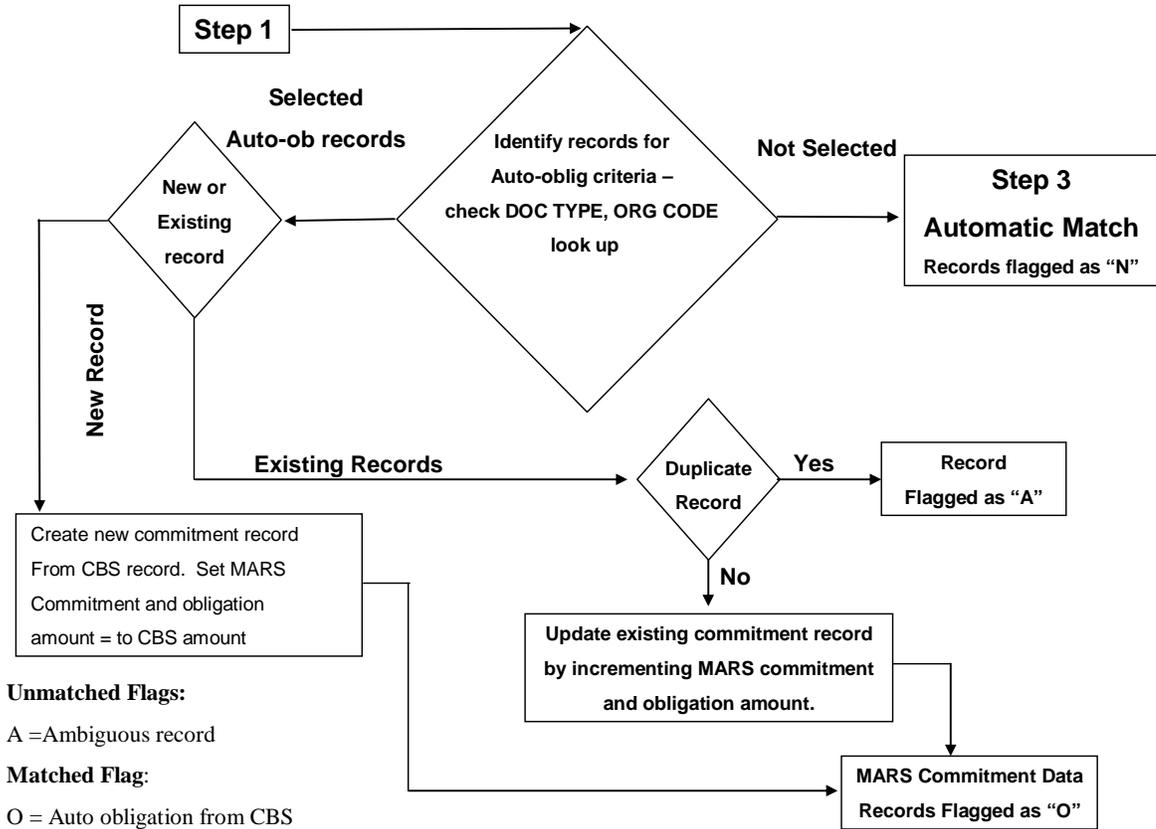
### **Corrective Actions**

Use the *Ignored Zeroed out CBS Trans Report* to view the Ignored records.

Use the *Match Error Report* to view invalid org/project/tasks or objects.

Step 2 – Automatic Obligation Process

Step 2 – Automatic Obligation Process



The Match Process performs the following processes in Step 2:

- (A) Records will be selected for Automatic Obligation by the Org/Task as found on the Automatic Obligation by Org/Task table.

If a CBS record is found, the process will check if a record has already been added to the ODCMAS table. It will first select records at the 10 digit level. If no record is found and the 7 digit level flag is set it will then look for records at the 7 digit level plus a 'P00' task. If one exists, the process will increment the commitment and obligation amount by the CBS amount. If one does not exist it will create one.

Org/Task must be on the Task table and not deactivated.

The same process will repeat using the Match ORG/TASK translation table.

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- (B) Records will be selected for Automatic Obligation by Document/Item Type as found on the Automatic Obligation by Doc/Item type table.

If a CBS record is found, the process will check if a record has already been added to the ODCMAS table. It will first select records at the 10 digit level. If no record is found and the 7 digit level flag is set it will then look for records at the 7 digit level plus a 'P00' task. If one exists, the process will increment the commitment and obligation amount by the CBS amount. If one does not exist it will create one.

Org/Project/Task must be on the OPT table and not deactivated.

The same process will repeat using the Match translation table.

- (C) Records will be selected for Automatic Obligation by Org Code/Document Number as found on the Automatic Obligation by Org Code/Document Number table.

If a CBS record is found, the process will check if a record has already been added to the ODCMAS table. It will first select records at the 10 digit level. If no record is found and the 7 digit level flag is set it will then look for records at the 7 digit level plus a 'P00' task. If one exists, the process will increment the commitment and obligation amount by the CBS amount. If one does not exist it will create one

Org/Project/Task must be on the OPT table and not deactivated.

The same process will repeat using the Match translation table.



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- The same process will repeat using the Match ORG/PROJECT/TASK translation table.
- If the parameters have been set up to use the range option it will validate that the transaction amount does not exceed the Commitment amount by the range specified. If the match is not using the range, then the process will match not matter what the total CBS amount is.
- If more than one commitment record is found for the accounting information it will try to match on the actual CBS amount. If no range is used then an ambiguous match will occur.
- If a record does not get matched at this point it will be marked as an unmatched processed record.

After the process is completed check to see if any records are in error or did not match. If so you will need to correct these. Please refer to the [Correcting Match errors](#) page.

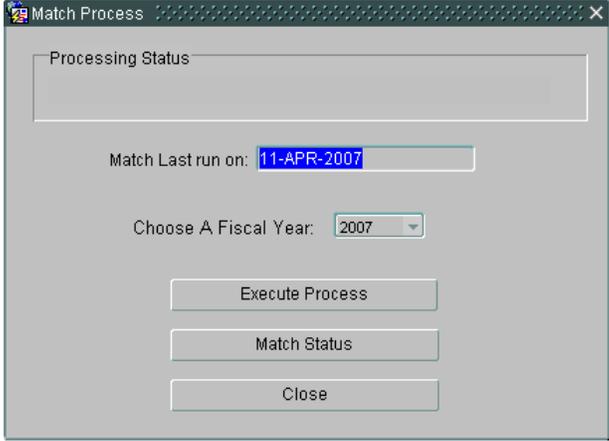
## Running the Match

User performs the following steps to run the Match:

| <i>Step</i> | <i>Action</i>   |
|-------------|---|
| <b>1</b>    | <p>To run the Match process, select the "Automatic Match and Obligations" process from the MARS match menu.</p>  <p>The screenshot shows the MARS application window with the 'Match' menu item highlighted. The sub-menu is open, showing two options: 'Run Automatic Match and Obligation Process' and 'Manual Commitment Match / Action Taken Log'. The background window displays the MARS logo and the text 'Management Analysis &amp; Reporting System'. The window title is 'Reporting System (MARS)'. There are also input fields for 'FY: 2007' and 'Organization Code'.</p> |

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|   |   |
|---|---|
| 2 | <p>To run the match, select the proper Fiscal Year from the <i>Choose A Fiscal Year</i> drop down box.</p>    |
| 3 | <p>Click the <i>Execute Process</i> button.</p>   |
| 4 | <p>The message "<i>Processing Match Please be patient</i>" will appear while the process is running in the <i>Processing Status</i> box,</p> <p><i>REMEMBER: Do NOT stop the match routine once the processing begins. If for any reason the system is shut down or turned off, the process can be resubmitted.</i></p> |
| 5 | <p>When the match is finished, the message "<i>Match Completed</i>" will appear in the processing status box.</p>   |
| 6 | <p>Either click <i>Close</i> to exit or click the <i>Match Status</i> to display a summary of the transactions.</p>   |

## Correcting Match Errors

To view your Match Errors run the **Match Error Report**. This report will display all of the CBS transactions that did not reconcile with the processes listed described in the Match Process below. The following screen print shows the **Match Error Report** parameter screen and the report:

### Match Error Report Parameter Form

#### Match Error Report (1)

Shows cumulative records that rejected from the match program & the reason why the record did not match. The report will help the user correct errors in CBS and / or FRS. The Match process will run automatically on a daily basis. Once run all rejected records will display in this report.

You can limit the data returned to any or all of the following criteria:

Fiscal Year  
 Fund Code Fiscal Year  
 -  -  -  -  -  -  Organization Code  
 (SQL wildcard not allowed for Organization Codes 4 - 7. Single number OK)  
 Project Code (SQL wildcards OK)  
 Task Code (SQL wildcards OK)  
 -  -  -  Object Class  
 (SQL wildcard not allowed. Single number OK)  
 Document Type (SQL wildcards OK)  
 Item Type (SQL wildcards OK)  
 Affected Reference Number (SQL wildcards OK)

[an error occurred while processing this directive] Error Codes

CBS transactions from  to  (mm-dd-yyyy) format

### Match Error Report

|                      |   |                 |                  |                          |                        |            |               |      |            |            |   |
|----------------------|---|-----------------|------------------|--------------------------|------------------------|------------|---------------|------|------------|------------|---|
| Report #1            | NATIONAL MARINE FISHERIES SERVICE<br>MARS Pre Production Server<br>Match Errors Report<br>Fiscal Year: 2007 Fund Code Fiscal Year: 2007 |                 |                  |                          |                        |            |               |      |            |            | Oct 5, 2007<br>11:40:31 AM<br>Page 1 of 1 |
| Org<br>30 11 0000 01 | Project   | Task            | Program Code     | Error Code               | Affected Reference Num |            |               |      |            |            |   |
|                      |   |                 |                  | ALL                      |                        |            |               |      |            |            |   |
| Object Class Code    | Document Type   | Item Type       | Trans Date from  | Trans Date before        |                        |            |               |      |            |            |   |
| Organization Code    | Project/<br>Task  | Object<br>Class | Doc/Item<br>Type | Affected<br>Reference No | Trans<br>No            | Item<br>No | Trans<br>Date | User | Net Amount | Match Code | Comment                                   |
| <b>Report Total:</b> |   |                 |                  |                          |                        |            |               |      |            |            |   |

### **Match Process**

The match process executes the following three processes:

#### **Process 1 - Verification**

This process compares the CBS record against the MARS *ORG/Project/Task Table* to verify if the CBS Org/Project/Task combinations have been defined in your OPT Table.

This process also verifies that the object class being downloaded from CBS is a valid object class. The valid object classes are in the range from 10-00-00-00 to 43-99-00-00 and 95-XX-00-00.

Invalid Document Type/Item Types will be displayed if they have not been defined in the MARS Document Type/Item Type tables.

Missing Affected Document Number. If a transaction does not have an Affected Document Number, it will be flagged on the error report.

#### **Process 2 - Automatic Obligation**

Based on the FMC's parameter set up, there are four methods that can be used to mark transactions so that they will be automatically obligated from CBS to MARS:

- Document Types/Item Types,
- Organization Codes / Projects and Tasks,
- Organization Codes / Affected Document Numbers
- Organization Codes, Document Type/Item Types

#### **Process 3 - Automatic Match**

Based on the FMC's parameter set up, certain Document Types are matched against commitments that have been entered into MARS by the users. Commitments are matched based on the following criteria:

- FY,
- Org1 through Org7,
- Project Code,
- Task Code,
- Object1 through Object4,
- Affected Reference Number

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If there are multiple matches, the Match process will try to match on the dollar amounts if the criteria are exact and unique.

If, during the match process, a CBS record is not matched to a commitment, the user can perform a manual match using the *Manual Commitment Match / Action Taken Log form*.

### Corrective Actions for Unmatched Records

CBS records in error may also be corrected by submitting a cost adjustment to Finance. Refer to the Finance Handbook or your MARS Line Office/FMC Administrator on how to prepare a cost adjustment. If a cost adjustment is submitted and processed through CBS, at a later time the record in question will be zeroed out and ignored by the match. This process will take place as long as the invalid record remains marked as an error and another record is downloaded from CBS with the exact accounting information. The sum of these 2 records will equal zero.

| <i>Error Type</i>                                  | <i>Corrective Action</i>   |
|--|--|
| X = Commitment found with Remaining Commitment = 0 | Add additional funds to commitment amount<br>Add new commitment  |
| A = Ambiguous - Multiple Commitments               | The reason ambiguous errors occur is because the match found multiple records with the same Org, Project, Task, Affected Reference number, Document Type, Item Type, Object class, Fiscal Year and commitment amounts. Manually match the appropriate commitment record to CBS. Change commitment amount to equal CBS amount and rerun match or manually match |
| P - No commitment found                            | <b>Add a commitment</b><br>Check fields for Org, Project, Task, Affected Reference number, Document Type, Item Type, Object class, and Fiscal Year.  |
| R = Out of range                                   | Check commitment dollar amount<br><br><b>Commitment Error</b><br>- change error in MARS.<br><br><b>CBS error</b><br>- submit cost adjustment to Finance or manually match  |
| - = Total CBS amount less than 0                   | Manually match   |

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|                        |  |
|------------------------|--|
| E = Undefined Org/Task | If the org/project/task is valid on the transaction then add an org/project/task combination to the Org/Project/Task table.<br><br>If not valid, submit cost adjustment to Finance to fix the accounting code. |
|------------------------|--|

### ***Verifying Matched records***

To view all records that have been automatically matched to an Org and Project/Task, run the Detailed FRS report. This report provides a detailed listing of all commitments and their associated CBS records that total to the Obligation. You may also use the CBS Obligations options within the FRS application to view CBS data that has been matched to a Commitment.

### **Manual Commitment Match Adjustments**

When all of the match processes have been executed and the CBS transaction still has not created a commitment or matched to a commitment, the ***Manual Commitment Match*** module allows a user to reconcile any unmatched transactions by manually matching a CBS obligation to an existing commitment.

#### **Manual Commitment Match Adjustments / Action Taken Log**

### Getting Started

To access the Manual Commitment Match / Action Taken Log forms, select Match from the MARS Main menu then select Manual Commitment Match / Action Taken Log from the submenu. Users should execute the Run Automatic Match and Obligation Process before performing the manual match to ensure the Match Error Report reflects the latest data.



### Manual Match/Action Taken Log - Matching Error Listing Form

The purpose of this form is to allow the user to view the unmatched CBS transactions. The following outlines the steps a user needs to perform to match a CBS transaction.

**Step 1: Enter Selection Criteria** – This step allows the user to enter query data to display all, or a subset, of the data residing in the Error Match Report.

**Step 2: Choose Additional Selection Parameters** – This step allows a user to further refine the rejects by selecting additional match parameters so that the CBS transaction can be matched as closely as possible. This step can be executed multiple times using the different match criteria.

**Step 3: Show commitments for Selected CAMS Transactions** – This function executes the query and displays all possible rejects that match the criteria entered in Step 2.

**Optional Step: Enter Comment for Selected CAMS Transactions** – This step allows a user to enter a comment on the CBS transaction before it is matched to a commitment for future reference.





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**Trans #** The number assigned when the CBS record is processed through the Match.

**CAMS Desc** A description associated to the transaction.

### Detail Descriptions of the Steps Needed to Perform the Manual Match

#### Step 1: Enter Selection Criteria



Once the criteria have been entered and the query has been executed, a list of transactions will display that need to be reconciled.

## **Step 2 Choose Additional Selection Parameters**

The Manual Match is performed when there is not an exact match between a commitment record and a CBS record. The first Manual Match window will display the same records as found in the Match Error Report. Enter your selection parameters into the first record on the window, and then execute your query by pressing the Execute Query button on the top of the form.

The records displayed are CBS transactions that have not matched (reconciled) due to the error indicated to the right (use scroll bar to view). The user has the capability to match any CBS Transaction within their FMC to any Commitment depending on the FMC security restrictions. The user may select an individual CBS Transaction and press the **Show Commitments** button to display available Commitments to Match. The system requires a transaction to match, at a minimum, on the following items:

- Program 3 Code (Line Item)
- Org 2 Code
- Object 1 Code
- If the Project is a PPA, then the match criteria will be required at the Project level.

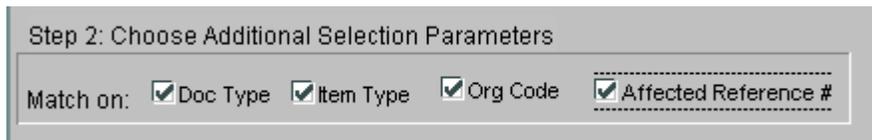
Each FMC may also choose to match on any, or all, of the following

- Org 3 – 7 codes,
- Document type/Item Type
- Affected Reference Number

## **Step 3: Show commitments for Selected CAMS Transactions**

The following examples illustrate that Step 2 and Step 3 can be done multiple times to assist the user in locating a commitment.

In this example all **Additional Selection Parameters** have been checked for the selected CBS Transaction.

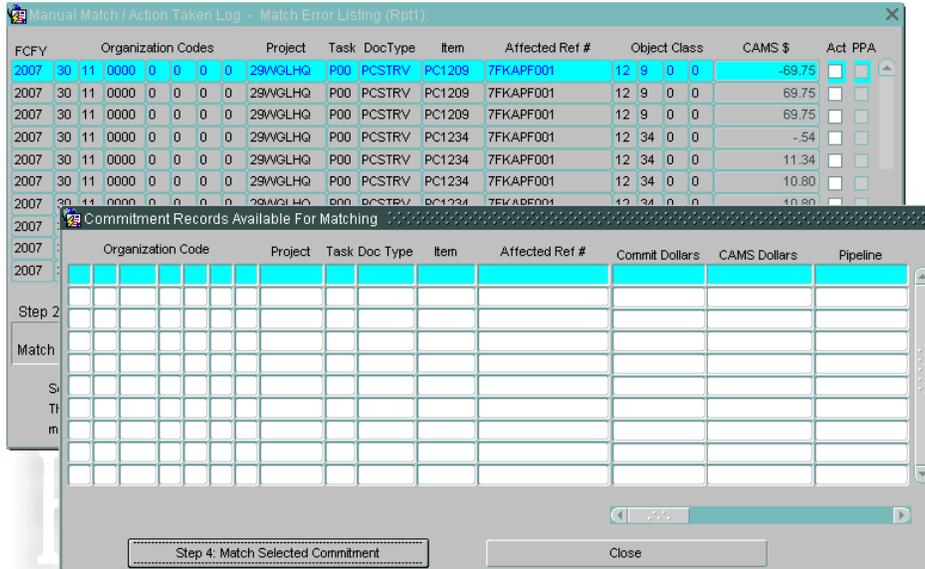


Step 2: Choose Additional Selection Parameters

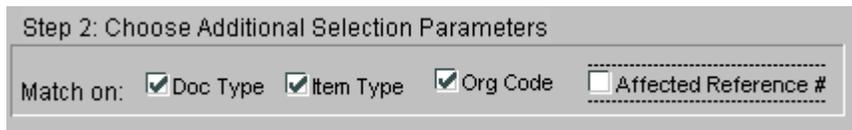
Match on:  Doc Type  Item Type  Org Code  Affected Reference #

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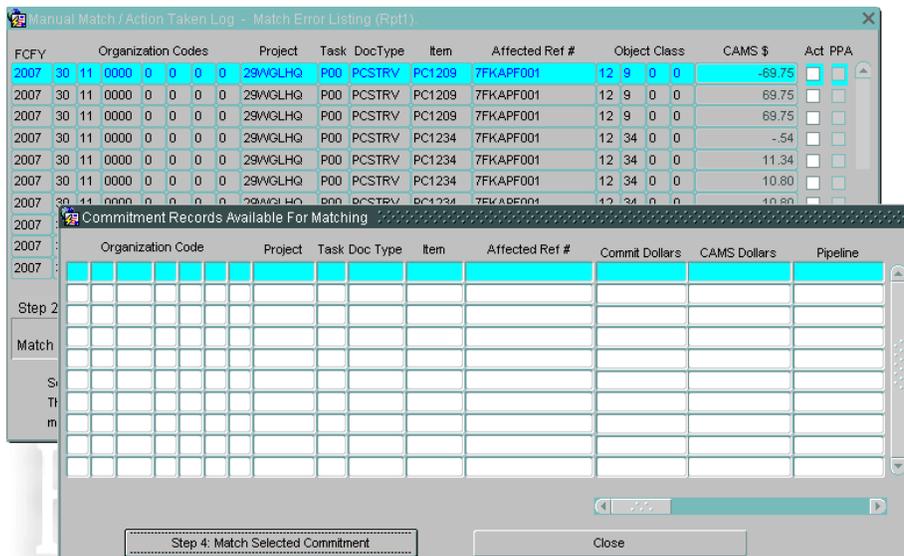
The result is that no match is found on the *Commitment Records Available for Matching Form*.



In the next example all *Additional Selection Parameters* have been checked, except for *Affected Reference #*, for the selected CBS transaction:



Again, the result is no match is found on the *Commitment Records Available for Matching Form*.



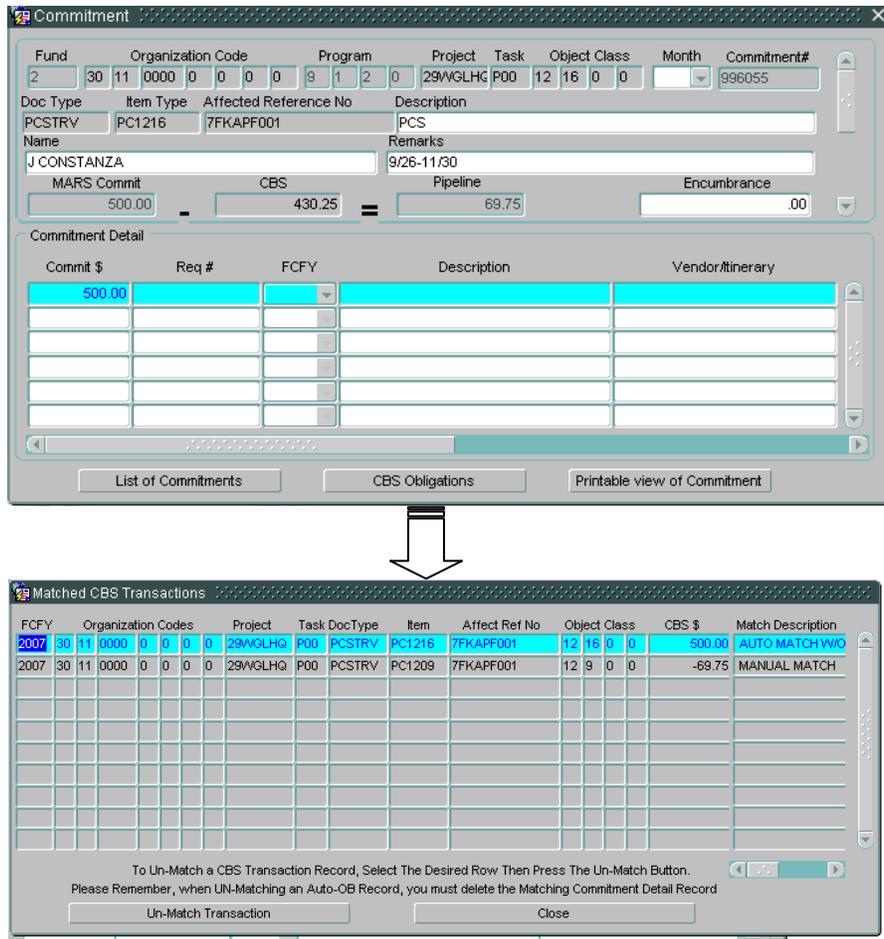




### Un-Match CBS Transactions

This function is to correct any CBS transaction that was incorrectly matched to a commitment. This **Un-Match Transaction** button is located on the **Matched CBS Transaction Form** under the **Commitment Form**. If a commitment record must be unmatched from the CBS transaction, the user can perform the following steps to manually un-match the record.

1. Navigate to the **Commitment Form**.
2. Click **CBS Obligations** button.
3. Locate the CBS record to be unmatched.



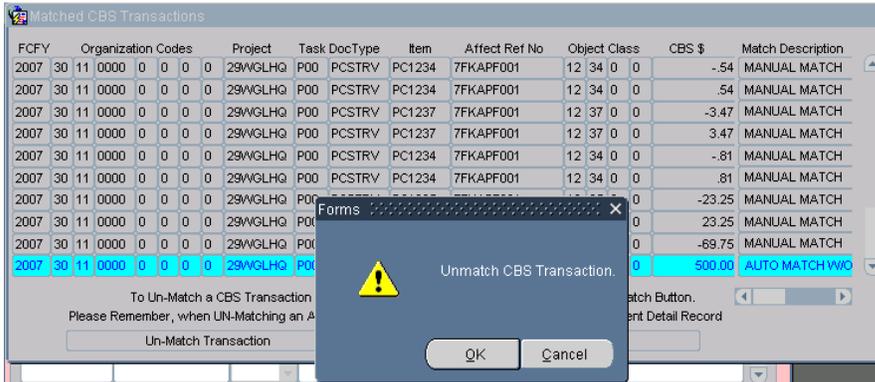
4. Click **Un-Match Transaction**.
5. The process will unlink the transaction from the Commitment and reduce the CBS amount on the Commitment record by the amount found on the CBS transaction.

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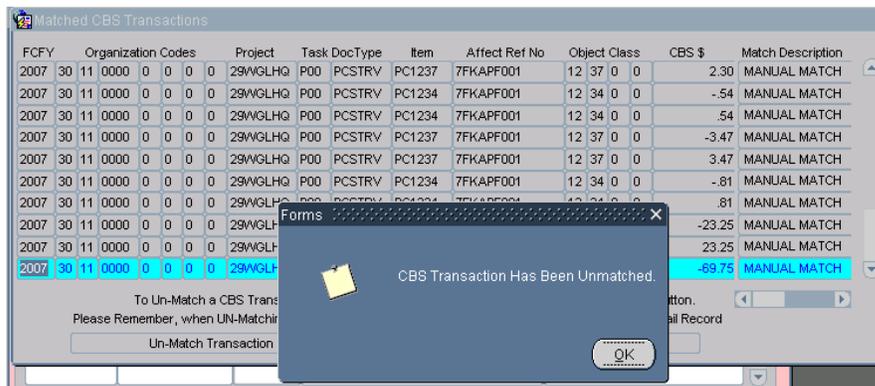
Another record may be unlinked from the same Commitment.

- The Remaining Commitment amount will increase by the amount of the transaction and the CBS amount to decrease by the amount of the transaction.

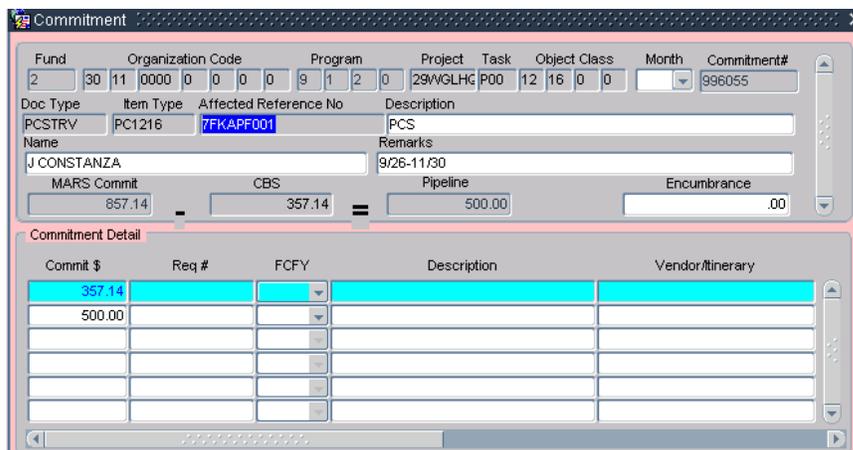
### Step 1: Request to Unmatch Transaction



### Step 2: Confirm Transaction



### Step 3: Displays Result of Transaction



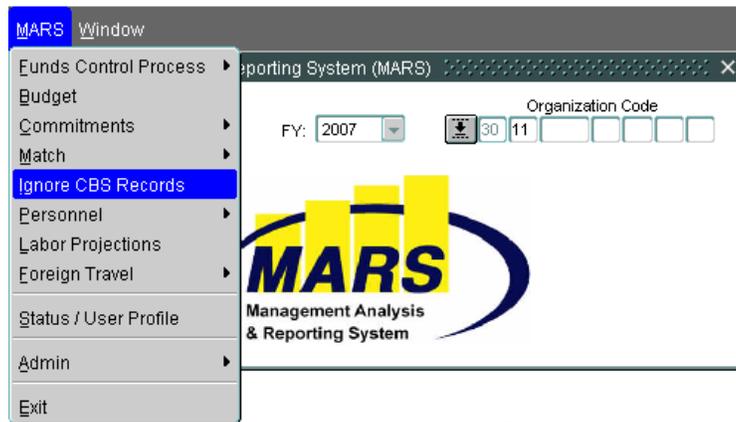
### ***Ignore CBS Records***

#### **Manual Method**

The Ignore CBS records process will allow you to exclude CBS records from the match process and the error report. If these records are marked as ignored they cannot be matched and will not display in any reports. To ignore or exclude any CBS transactions, first perform a query to display any desired records. Then check the Ignore Check box on the selected record and press the Save button. This form will display all previously ignored records as well as any record that is available to be ignored.

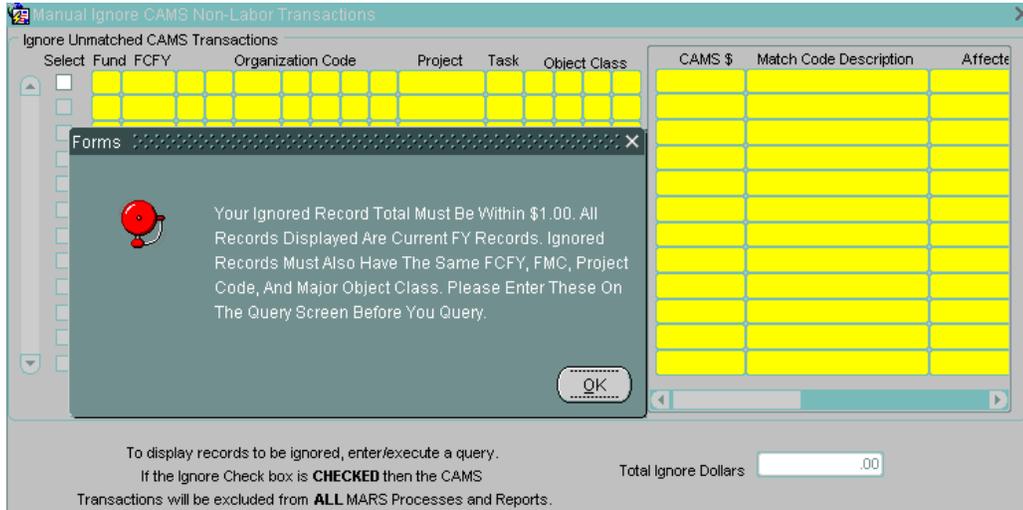
#### **Getting Started**

To access the *Ignore CBS Records form*, select it from the *MARS Main menu*.



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The *Manual Ignore CAMS Non Labor Transactions form* will open in the query mode with the following message “Your Ignored Record Total Must be Within \$1.00. All Records Displayed Are current FY Records. Ignored Records Must Also Have the Same FCFY, FMC, Project Code and Major Object Class. Please Enter These On the Query Screen Before You Query.”

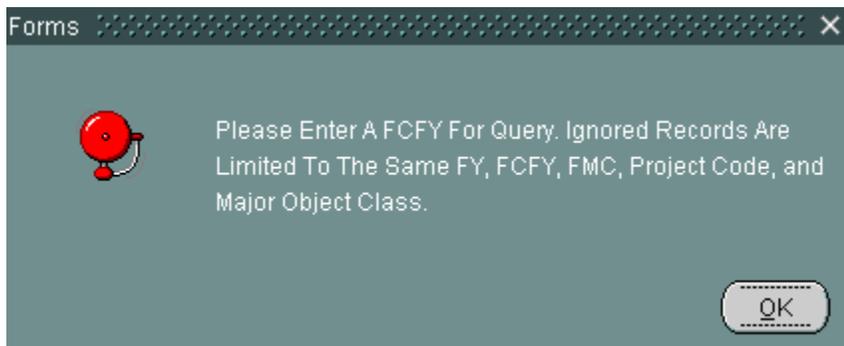


The screenshot shows a window titled "Manual Ignore CAMS Non-Labor Transactions". The window contains a table with columns: "Select", "Fund", "FCFY", "Organization Code", "Project", "Task", "Object Class", "CAMS \$", "Match Code Description", and "Affecte". A message dialog box is overlaid on the table, containing a red speech bubble icon and the text: "Your Ignored Record Total Must Be Within \$1.00. All Records Displayed Are Current FY Records. Ignored Records Must Also Have The Same FCFY, FMC, Project Code, And Major Object Class. Please Enter These On The Query Screen Before You Query." Below the dialog box, there is a text area with instructions: "To display records to be ignored, enter/execute a query. If the Ignore Check box is CHECKED then the CAMS Transactions will be excluded from ALL MARS Processes and Reports." and a "Total Ignore Dollars" field with a value of ".00".

As displayed in the message, the required fields must be entered in the query before the system will allow the user to execute the query. The required fields are:

- Fund
- FCFY
- FMC
- Project Code
- Major Object Class

If the required fields are not entered, the system will display the following message:



The screenshot shows a message dialog box titled "Forms" with a red speech bubble icon. The text inside the dialog box reads: "Please Enter A FCFY For Query. Ignored Records Are Limited To The Same FY, FCFY, FMC, Project Code, and Major Object Class." There is an "OK" button at the bottom right of the dialog box.

