

HAWAII/FAMIS PROCEDURES MANUAL
VOLUME II - SYSTEM MAINTENANCE MANUAL
CHAPTER XII
INTERFACE/BATCHING PROGRAM

This chapter describes the Interface/Batching Program that has been added to FAMIS to assist users in complying with the added batching requirements for expenditure transactions effective January 1, 1985. Originally, this automated batching process was to be incorporated in the existing interface program, but because the automated batching functions were much different than those functions performed by the current interface program, the Interface/Batching Program was developed as a separate process.

INTERFACE/BATCHING PROGRAM OBJECTIVES

The objectives of the Interface/Batching Program are to:

- o Provide departments with variable batching capabilities for expenditure transactions entered through the on-line accounting transaction file, CADES system and departmental interface files whereby the system would automatically rebatch the data into smaller batches of expenditures that meet the current expenditure batching requirements;
- o Retrieve information from FAMIS files and tables to create the new batches; and
- o Provide departments with control reports of how the transactions have been rebatched.

INTERFACE/BATCHING PROGRAM OVERVIEW

Listed below is an overview of the functions of the Interface/Batching Program:

- o Select groups of transactions that are to be rebatched;
- o Combine multiple "super" batches entered by a department and treat them as a single batch for rebatching purposes;
- o Retrieve classification data and other information from copies of selected master files and tables;
- o Determine the predefined batching rules for the particular department;

- o Sort and rebatch the data according to department defined rules and other DAGS defined batching rules;
- o Generate new batch headers of each batch created;
- o Assign new Department Batch Reference Numbers to the newly created batches;
- o Generate an output file of newly created batches to be used as input to program 080, for subsequent printing of automated SWVs; and
- o Generate control reports that reflect control totals and the details of rejected transactions and what transaction is in what batch.

To support the above functions of the Interface/Batching Program, the following paragraphs will discuss the:

- o Batching Options;
- o Batching Descriptor Subtable;
- o Interface/Batching Program Functions;
- o Departmental Batching Procedures; and
- o Financial Reports.

Batching Options

The variables used for batching will be determined from the Batching Descriptor Subtable and the input classification elements contained on the batches selected for rebatching. The Batching Options are specified in a single sort order but can be different for different agencies. The sort order for the Batching Options are:

- o Department;
- o Division - AC only;
- o Batch Type;
- o Fiscal Month;
- o Department Batch Reference Number (1st 4 digits);
- o Fund;

- o Vendor No/Sfx; and
- o Vendor Name.

Batching Descriptor Subtable

To use the Interface/Batching Program, departments must establish the Batching Options to be performed in the Batching Descriptor Subtable (D07). The control key of the Batching Descriptor Subtable (consisting of Department and Batch Type) is used to determine the batches to be rebatched in the batching extract program. By having the batch type in the control key, departments will be able to apply different batching criteria to different types of batches.

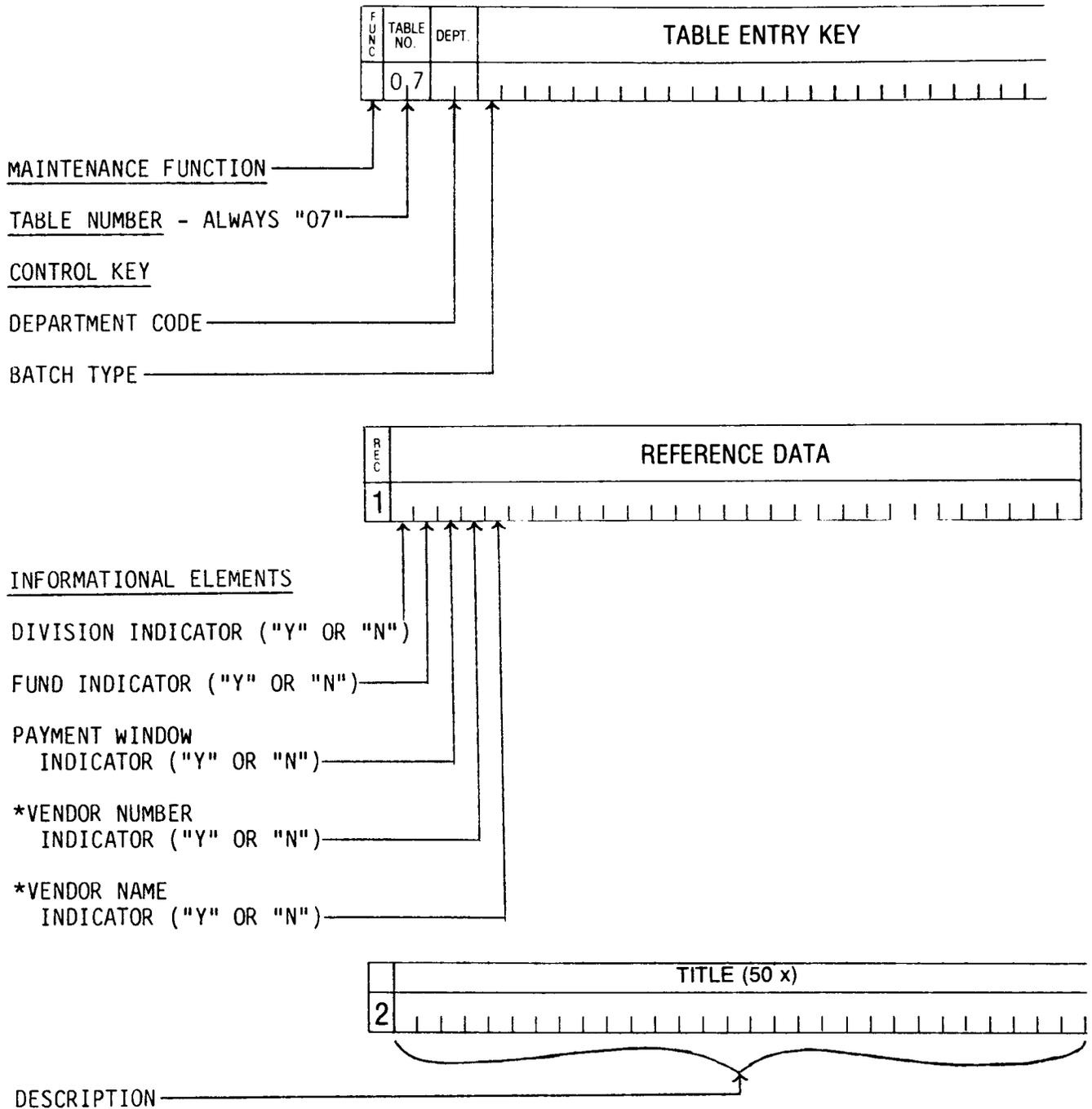
The format of the Batching Descriptor Subtable is divided into four segments:

- o Subtable Number (D07) - Used to identify Batching Descriptor Subtable in Descriptor Table File. The Batching Descriptor Subtable is currently one of the forty-five subtables in the Descriptor Table File which range from D01 to D54.
- o Control Key - Used to select batches for rebatching.
- o Informational Elements - A series of yes and no indicators used to indicate the batch options to be performed by the Interface/Batching Program.
- o Description - Used to describe the Batching Descriptor Subtable record.

The composition of each of the segments identified above is illustrated in Exhibit XII-1. It should be noted that the input coding and data entry procedures for the Descriptor Tables are described, in detail, in Volume II, Chapter II - "Table Maintenance Coding Procedures" and Chapter IV - "Table Maintenance Data Entry". The error codes and messages associated with the Batching Descriptor Subtable are contained in Appendix D - "Table Maintenance Error Codes and Messages".

EXHIBIT XII-1

BATCHING DESCRIPTOR SUBTABLE SEGMENTS



*NUMBER/NAME MUST BE OPPOSITE
("Y"/"N") OR ("N"/"Y")

Interface/Batching Program Functions

The Interface/Batching Program consists of four distinct groups of programming functions. The programming functions are:

- o Batching Extract Program;
- o Condensed Table/File Program;
- o Construct Sort Key Program; and
- o Batching Program.

An overview of the programming functions is illustrated in Exhibit XII-2.

Batching Extract Program

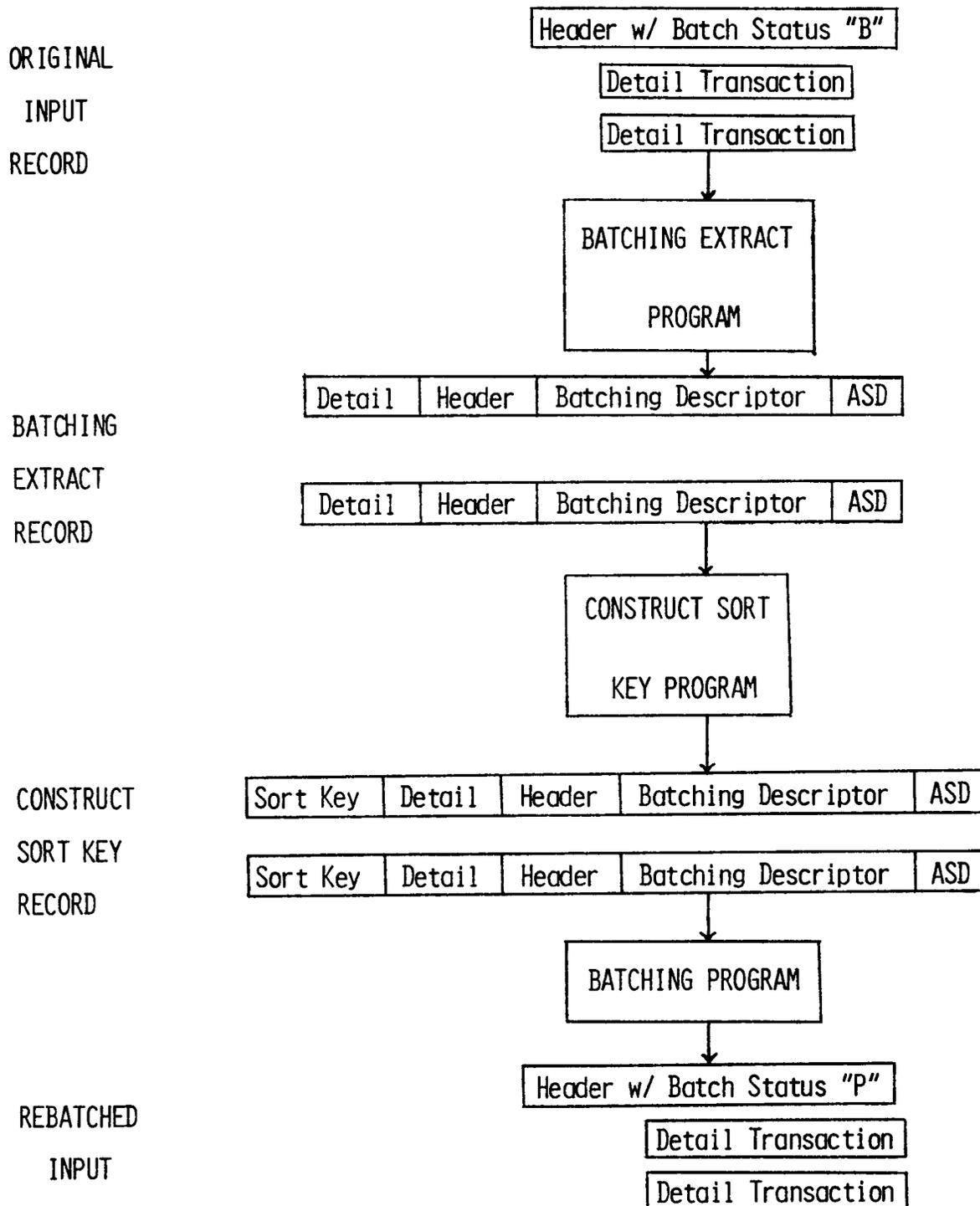
In order to use the Interface/Batching Program, expenditure batches must be coded with a "B" department batch status. The sources of input for these expenditure batches include transactions entered on-line, through CADES and through departmental interface.

Each night at the beginning of the daily processing cycle in FAMIS, the Batching Extract Program will:

- o Select and delete expenditure batches with a department batch status code "B" from their respective sources;
- o Match the batch type of the selected batches to the Batching Descriptor Subtable;
- o Reject selected batches that do not match the Batching Descriptor Subtable control key;
- o Produce transaction count control reports by department and detail reports of transactions rejected (Refer to Batching Extract Program Reports described in subsequent sections of this chapter);
- o Right justify and left zero fill the vendor number and reference document number fields, if entered;
- o Left justify with trailing blanks the Department Batch Reference Number field; and
- o Create and pass the records to the Construct Sort Key Program.

EXHIBIT XII-2

PROGRAMMING FUNCTION OVERVIEW



Condensed Table/File Program

The purpose of the Condensed Table/File Program is to establish condensed versions of the FAMIS tables and files that will be used by the Construct Sort Key Program to retrieve information that is needed to properly rebatch the extracted expenditure transactions. To ensure that the most current information is available, the condensed versions of the following tables and files will be copied from the prior night's production run:

- o Vendor Edit Table - to retrieve vendor name and address - 1;
- o Contract Ledger File - to retrieve fund, yr, apprn acct, vendor number, and vendor name;
- o Document File - to retrieve fund, yr, apprn acct, vendor number, and vendor name; and
- o Appropriation Account Table - to retrieve division code.

Construct Sort Key Program

The third programming function of the Interface/Batching Program is the Construct Sort Key Program. The purpose of the Construct Sort Key Program is to construct and sort department expenditure transactions by the Batching Options specified by the department. The Construct Sort Key Program accomplishes this by:

- o Constructing a sort key from the batching option indicators on the Batching Descriptor Subtable, look ups from condensed tables/files, and data elements on the records passed from the Batching Extract Program;
- o Affixing the sort key (comprised of the batching option data elements) to each record passed from the Batching Extract Program;
- o Sorting expanded records by sort key;
- o Resorting expanded records by payment window if required; and
- o Passing expanded records to the Batching Program.

Note: If an input transaction contains "blanks" in any one of the required sort fields, and the system is unable to retrieve information to be used in the sort field (such as a document file no match condition), the system will rebatch the transaction with zeros in the field.

Batching Program

The last programming function of the Interface/Batching Program is the Batching Program. The purpose of the Batching Program is to generate new batch headers of each batch created and assign new Department Batch Reference Numbers to the newly created batches. The Batching Program accomplishes this by:

- o Reassigning the fifth and sixth positions of the Department Batch Reference Number with "01" and incrementing by one the required number of batches to be rebatched. This process will continue until all unique combinations of the first five data elements of the sort key from the Construct Sort Key record are exhausted. The first five data elements of the sort key are:
 - oo Department Code
 - oo Division Code - AC only
 - oo Batch Type
 - oo Fiscal Month
 - oo Department Batch Reference No. (first four positions of input Department Batch Reference Number).

Additionally, hard coded logic in the Batching Program will limit the number of vendors in a SWV to 14.

- o Generating batch headers using:
 - oo Reassigned six digit Department Batch Reference Number.
 - oo Data elements contained on the original transaction (i.e., fiscal month, batch type, etc.).
 - oo Special hard coded logic (i.e., posting negative transaction amounts for TC 200, 201, and 202, department batch status = "P", etc.).
- o Producing detailed reports listing generated batches with their corresponding input batch.

Departmental Batching Procedures

If a department decides to use the Interface/Batching Program, a new method of batching and controlling SWV transactions should be developed. This section outlines areas which should be reviewed by departments before using the Interface/Batching Program.

Assignment of Department Batch Reference Numbers

If your department decides to utilize the Interface/Batching Program, Department Batch Reference Numbers will need to be controlled and entered with a special format to ensure that duplicate batches are not accidentally created. Departments should establish a unique first digit of the Department Batch Reference Number to segregate normal processing SWV from Interface/Batching Program SWV. Additional controls and formats are required if division uniqueness is required. The following is an example of a format which will provide division uniqueness within a department.

- o Byte 1 - value represents the division
 - A Airports
 - B Harbors
 - C Highways

- o Byte 2 - value represents the month
 - A January
 - B February
 - C March

- o Byte 3 - value represents the day of the month

- o Byte 4 - value represents the personnel assigning number of the batch for that month and day

Transaction Count Control Logs

Departments should maintain Transaction Count Control Logs for batches submitted to the Interface/Batching Program. These control logs should be designed:

- o To provide daily transaction counts (header and details) for reconciliation to the Batching Extract Control Report; and
- o To provide sufficient information for researching errors when the daily transaction count cannot be reconciled to the Batching Extract Control Report.

The daily reconciliation of transaction counts to the department Batching Extract Control Report should be a standard operating procedure if a department elects to utilize the Interface/Batching Program.

Identification of Support Documents to Rebatched SWV

Since the system will rebatch the original transactions that were submitted, procedures must be developed to identify support documents (i.e., purchase orders, invoices, etc.) to the rebatched transactions. Reports MBP 098-1, Input Rebatching Transaction Report and MBP 098-3, Generated Rebatching Transaction Report will be distributed daily to identify the original transaction batches to the rebatched transactions. However, it is advisable to develop new support document filing procedures (such as filing purchase orders and invoices by vendor) to facilitate the identification of support documents to the rebatched SWV.

Financial Reports

To assist the users of the Interface/Batching Program in reconciling transaction counts and in identifying support documents to the rebatched transactions, the following types of reports will be generated from the Interface/Batching Program and distributed to departments daily:

- o Batching Extract Program Reports; and
- o Rebatching Transaction Reports.

Batching Extract Program Reports

The three reports generated from the Batching Extract Program are:

- o Rejected On-line Hold Transaction Report

The Rejected On-line Hold Transaction Report, MBP 090-1 (illustrated in Exhibit XII-3), displays the details of all on-line batches which were rejected by the Batching Extract Program because of a no-match condition to the batching descriptor table.

- o Rejected Interface Transaction Report

The Rejected Interface Transaction Report, MBP 090-2 (illustrated in Exhibit XII-4), displays the details of all CADES and department interface batches which were rejected by the Batching Extract Program because of a no-match condition to the batching descriptor table.

- o Department Batching Extract Control Report

The Department Batching Extract Control Report, MBP 090-3 (illustrated in Exhibit XII-5), displays the transaction counts of all batches extracted by the Batching Extract Program and should be used to reconcile the daily transaction count totals.

Rebatching Transaction Reports

Prior to the printing of the SWV, two rebatching transaction reports will be generated and distributed to the departments to inform them of how their input transactions were rebatched so that preparation for the SWV can be done (i.e., grouping of the purchase orders, invoices, etc. by the newly generated batches). The two rebatching transaction reports are:

----- R E J E C T E D O N L I N E H O L D T R A N S A C T I O N R E P O R T -----

DEPT: M BATCH-DATE: BATCH-TYPE: L BATCH-NO: Y FM: 07 BATCH-DEPT-REF-NO: M10931 COMPTR-VOUCHER-NO: 480.95
 WW-SUB-FUND: G W-ROUTING-IND: RED-TAG-IND: PTI: E BATCH-COUNT: 00007 BATCH-AMOUNT:

-----TRANS ID-----	TR	DEPT	F-YR	APP	OBJECT	CC	ACTV	PROJECT	CURR-DOC-NO	DOC-DATE	REF-DOC-NO	M R D	TRANS AMOUNT
		VENDOR-REF-NO		INVOICE DATE		-----REMITTANCE DATA-----		VENDOR CODE		ASD			
		---OPT DEPT DATA---		-----VENDOR NAME-----									
M LM10931	Y000010	221	M	G-86-015	3006	0132	011000						37.32
		905255			11/25/85			0000039130-00	01/13/86				
M LM10931	Y000020	221	M	G-86-016	3006	0132	012200						20.79
		8024215			12/24/85			0000039400-00	01/07/86				
M LM10931	Y000030	221	M	G-86-015	7711	0136	011000						57.11
		3587675			12/17/85			0000040339-00	01/10/86				
M LM10931	Y000040	221	M	G-86-017	3006	0456	013200						23.95
		4399			11/04/85			0000040482-00	01/09/86				
M LM10931	Y000050	221	M	G-86-017	3006	0131	013400						97.12
		25234			01/07/86			0000040970-00	01/04/86				
M LM10931	Y000060	221	M	G-86-016	3006	0131	011100						213.56
		25232			01/07/86			0000040970-00	01/09/86				
M LM10931	Y000070	221	M	G-86-016	3006	0131	011100						31.10
		17663			12/16/85			0000042050-00	01/07/86				
BATCH TRANS COUNT & AMT												00007	480.95

REJECTED ONLINE HOLD TRANSACTION REPORT

EXHIBIT XII-3

XII-12

JUN 1 1986

REJECTED INTERFACE TRANSACTION REPORT

DEPT: M BATCH-DATE: BATCH-TYPE: L BATCH-NO: Y FM: 07 BATCH-DEPT-REF-NO: M30931 COMPTR-VOUCHER-NO:
 WW-SUB-FUND: G W-ROUTING-IND: RED-TAG-IND: PTI: E BATCH-COUNT: 00007 BATCH-AMOUNT: 480.95

TRANS ID	TR	DEPT	F-YR	APP	OBJECT	CC	ACTV	PROJECT	CURR-DOC-NO	DOC-DATE	REF-DOC-NO	M R O	TRANS AMOUNT
		VENDOR-REF-NO		INVOICE DATE		REMITTANCE DATA		VENDOR CODE		ASD			
-----OPT DEPT DATA-----		-----VENDOR NAME-----											
M LM30931	Y000010	221 M	G-86-015	3006	0132			011000					37.32
	905255				11/25/85				39130	-00	01/13/86		
M LM30931	Y000020	221 M	G-86-016	3006	0131			012200					20.79
	8024215				12/24/85				39400	-00	01/07/86		
M LM30931	Y000030	221 M	G-86-015	7711	0136			011000					57.11
	3587675				12/17/85				40339	-00	01/10/86		
M LM30931	Y000040	221 M	G-86-017	3006	0456			013200					23.95
	4399				11/04/85				40482	-00	01/09/86		
M LM30931	Y000050	221 M	G-86-017	3006	0131			013400					97.12
	25234				01/07/86				40970	-00	01/04/86		
M LM30931	Y000060	221 M	G-86-016	3006	0131			011100					213.56
	25232				01/07/86				40970	-00	01/09/86		
M LM30931	Y000070	221 M	G-86-016	3006	0131			011100					31.10
	17663				12/16/85				42050	-00	01/07/86		

REJECTED INTERFACE TRANSACTION REPORT

EXHIBIT XII-4

XII-13

JUN 1 1988

DEPARTMENT BATCHING EXTRACT CONTROL REPORT

	<u>ONLINE HOLD FILE</u>	<u>INTERFACE FILE</u>	<u>TOTAL</u>
INPUT TRANS	8	8	16
INPUT TRANS WITH STATUS 'B'	8	8	16
REJECTED	8	8	16
REBATCHED	0	0	0
REMAINING	0	0	0

DEPARTMENT BATCHING EXTRACT CONTROL REPORT

EXHIBIT XII-5

o Input Rebatching Transaction Report

The Input Rebatching Transaction Report, MBP 098-1 (illustrated in Exhibit XII-6), displays each input transaction, the generated batch to which the input transaction was assigned, and whether the data elements on the generated batch were input, looked up from a table/file, or could not be found. Indicators (CL, DF or VE) to the right of the data elements of the transactions listed under the generated batch denotes data that has been looked up from the respective table/file. Zeros in the data elements of the transactions listed under the generated batch denotes data that could not be found.

o Generated Rebatching Transaction Report

The Generated Rebatching Transaction Report, MBP 098-3 (illustrated in Exhibit XII-7), displays a detail listing of the generated batches and the corresponding input batch to which it corresponds. Like the Input Rebatching Transaction Report, this report will display whether the data elements on the generated batch were input, looked up from a table/file (i.e., indicators, CL, DF or VE), or could not be found (zeros).

INPUT REBATCHING TRANSACTION REPORT

DEPT: C
 AC-DIV: UNKNOWN DIVISION
 ----- I N P U T B A T C H ----- G E N E R A T E D B A T C H -----

DEPT REF	-BATCH-	NUMBER	TYP	SEQ	FM	AMOUNT	VENDOR#-SX **	VENDOR	**	FYRAPP	**	DEPT REF	-BATCH-	NUMBER	TYP	SEQ	AMOUNT
A40901	L	00001				63.87	VF C VENDOR		DF	T85903	DF	A40902	L	00004			63.87
A40901	L	00002				185.10	VE A VENDOR		DF	T85903	DF	A40902	L	00001			185.10
A40901	L	00003				29.32	VE A VENDOR		VE	G86100		A40901	L	00001			29.32
A40901	L	00004				47.90	VE C VENDOR		VE	T85903		A40902	L	00005			47.90
A40901	L	00005				90.52	VE HARTFENCE, XXXX		VE	G85081		A40901	L	00005			90.52
A40901	L	00006				84.11	VE H VENDOR		VE	G86100		A40901	L	00004			84.11
A40901	L	00007				232.81	VE D VENDOR		VE	T85907		A40903	L	00003			232.81
TOTAL FOR DBRN BATCH						*****		REC COUNT	7	AMTS		733.63					733.63
A40902	L	00001				57.42	VE A VENDOR		DF	T85903	DF	A40902	L	00003			57.42
A40902	L	00002				30.79	VE A VENDOR		DF	T85903	DF	A40902	L	00002			30.79
A40902	L	00003				89.12	VE A VENDOR		DF	T85903	DF	A40903	L	00001			89.12
A40902	L	00004				213.70	VE M VENDOR		VE	G85081	DF	A40901	L	00006			213.70
A40902	L	00005				76.02	VE A VENDOR		DF	G85081	DF	A40901	L	00002			76.02
A40902	L	00006				36.40	VE A VENDOR		DF	T85903	DF	A40903	L	00002			36.40
A40902	L	00007				25.16	VE A VENDOR		DF	G85081	DF	A40901	L	00003			25.16
TOTAL FOR DBRN BATCH						*****		REC COUNT	7	AMTS		528.61					528.61
B40901	L	00001				76.10	VE J VENDOR		VE	G86100		B40904	L	00003			76.10
B40901	L	00002				27.85	VE I VENDOR		VE	G86100		B40904	L	00002			27.85
B40901	L	00003				101.90	VE G VENDOR		VE	G86100		B40904	L	00001			101.90
B40901	L	00004				43.82	VE A VENDOR		VE	T85907		B40905	L	00001			43.82
B40901	L	00005				75.15	VE B VENDOR		VE	T85907		B40905	L	00002			75.15
B40901	L	00006				91.37	VE C VENDOR		VE	T85907		B40905	L	00003			91.37
TOTAL FOR DBRN BATCH						*****		REC COUNT	6	AMTS		416.19					416.19
TOTAL FOR AC DIVISION UNKNOWN DIVISION								REC COUNT	20	AMTS		1,678.43					1,678.43
TOTAL FOR DEPARTMENT C								REC COUNT	20	AMTS		1,678.43					1,678.43

XII-16

INPUT REBATCHING TRANSACTION REPORT

EXHIBIT XII-6

JUN 1 1988

GENERATED REBATCHING TRANSACTION REPORT

DEPT: C LAND AND NATURAL RESOURCES
 AC-DIV: UNKNOWN DIVISION

G E N E R A T E D B A T C H										I N P U T B A T C H		
DEPT REF	-BATCH-			AMOUNT	VENDOR#-SX **	VENDOR	** FYRAPP **	DEPT REF	-BATCH-		AMOUNT	
NUMBER	TYP SEQ FM							NUMBER	TYP SEQ			
A40901	L 00001			29.32	- VE A	VENDOR	VE G86100	A40901	L 00003		29.32	
A40901	L 00002			76.02	- VE A	VENDOR	DF G85081 DF	A40902	L 00005		76.02	
A40901	L 00003			25.16	- VE A	VENDOR	DF G85081 DF	A40902	L 00007		25.16	
A40901	L 00004			84.11	- VE H	VENDOR	VE G86100	A40901	L 00006		84.11	
A40901	L 00005			90.52	- VE	HARTPENCE, XXXX	VE G85081	A40901	L 00005		90.52	
A40901	L 00006			213.70	- VE M	VENDOR	VE G85081 DF	A40902	L 00004		213.70	
TOTAL FOR DBRN BATCH				*****		REC COUNT	6	AMTS		518.83	518.83	
A40902	L 00001			185.10	- VE A	VENDOR	DF T85903 DF	A40901	L 00002		185.10	
A40902	L 00002			30.79	- VE A	VENDOR	DF T85903 DF	A40902	L 00002		30.79	
A40902	L 00003			57.42	- VE A	VENDOR	DF T85903 DF	A40902	L 00001		57.42	
A40902	L 00004			63.87	- VE C	VENDOR	DF T85903 DF	A40901	L 00001		63.87	
A40902	L 00005			47.90	- VE C	VENDOR	VE T85903	A40901	L 00004		47.90	
TOTAL FOR DBRN BATCH				*****		REC COUNT	5	AMTS		385.08	385.08	
A40903	L 00001			89.12	- VE A	VENDOR	DF T85903 DF	A40902	L 00003		89.12	
A40903	L 00002			36.40	- VE A	VENDOR	DF T85903 DF	A40902	L 00006		36.40	
A40903	L 00003			232.81	- VE D	VENDOR	VE T85907	A40901	L 00007		232.81	
TOTAL FOR DBRN BATCH				*****		REC COUNT	3	AMTS		358.33	358.33	
B40904	L 00001			101.90	- VE G	VENDOR	VE G86100	B40901	L 00003		101.90	
B40904	L 00002			27.85	- VE I	VENDOR	VE G86100	B40901	L 00002		27.85	
B40904	L 00003			76.10	- VE J	VENDOR	VE G86100	B40901	L 00001		76.10	
TOTAL FOR DBRN BATCH				*****		REC COUNT	3	AMTS		205.85	205.85	
B40905	L 00001			43.82	- VE A	VENDOR	VE T85907	B40901	L 00004		43.82	
B40905	L 00002			75.15	- VE B	VENDOR	VE T85907	B40901	L 00005		75.15	
B40905	L 00003			91.37	- VE C	VENDOR	VE T85907	B40901	L 00006		91.37	
TOTAL FOR DBRN BATCH				*****		REC COUNT	3	AMTS		210.34	210.34	
TOTAL FOR AC DIVISION				UNKNOWN DIVISION		REC COUNT	20	AMTS		1,678.43	1,678.43	
TOTAL FOR DEPARTMENT C				LAND AND NATURAL RESOURCES		REC COUNT	20	AMTS		1,678.43	1,678.43	

GENERATED REBATCHING TRANSACTION REPORT

EXHIBIT XII-7

XII-17

JUN 1 1988