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NASA Technical Memorandum 78422

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Office of University Affairs  
Management Information System  
User's Guide and Documentation

Judy Distin, Doris Goodwin,  
and W. A. Greene

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Office of University Affairs  
Management Information System  
User's Guide and Documentation

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**NASA**

National Aeronautics  
and Space Administration

Scientific and Technical  
Information Office

1977

## Foreword

This report signals the completion of NASA's University Program Management Information System. The "OUA-MIS", under development since 1968, is the agency's primary source of information and data on the NASA-university relationship. In addition to NASA General Management, users of its products include the Executive and Legislation Branches, universities and other private sector organizations and individuals.

In view of the National importance of the OUA-MIS it is appropriate at this time to give credit to the key contributors to its development. Mr. Frank Smith, the then Assistant Administrator for University Affairs provided authorization and early initiative for the system, while his successors, Dr. D. D. Wyatt, Dr. Frank Hansing, and Dr. James Lawson gave their full support to the effort.

The initial prototype system was designed by John Giboney of Ames Research Center and programmed by Tom Joly, a contractor employee. This system operated at Ames from 1969 through 1973 when the actual data base and several of the report writer programs were incorporated in the second generation system operated at NASA Headquarters

Work on the expanded system was started in 1971 under a contract with Planning Research Corporation Data Services, Inc. Working with extremely detailed user specifications provided by the OUA Policy Coordination Division, Dave Hamrick and Phil Bescher executed the system design and supervised the detailed programming. Debugging and evolution of the system to its current, final fourth generation configuration between 1973 and 1977 was accomplished primarily by Bud Vestal, Joe Kramer, Sherri McCracken, Ralph Myers, and Bob Schlesinger, all of PRC.

Next came the all important documentation effort--this manual. Ms. Judy Distin, of PRC, performed the Herculean effort of examining the entire system to learn its essential operating characteristics and features. She subsequently organized the material, presenting it in a well-written and accurate document for the guidance of future users. During this process Mrs. Doris Goodwin, the OUA Information Systems Officer contributed heavily from her experience in actually operating and troubleshooting the system, while the undersigned provided commentary on his original design specifications and unique system features.

Bud Sawmelle and Joe Berkan of the Procurement Office and George Smith and Charles Gryboski of the



Office of Financial Management worked very closely with OUA in providing FACS data and in ensuring smooth interfacing of the FACS and the OUA-MIS programs. Overall direction of the EDP effort was by the Management Systems Office through the involvement of John Thompson, Ray Brogan and Harry Sperry.

W. A. Greene, Chief  
Policy Coordination Division  
Office of University Affairs  
July, 1977

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Several publications are mentioned in various places in the text of this document. The (popular title) formal title, scope notes and availability are included here for the readers' convenience.

- (CIC Code Book), NASA Contractor Identification Codes.

Contains identifying codes for all NASA contractors by individual plant location. The book is in the form of an ADP printout; limited availability. For information, contact NASA Procurement Office, Staff Operations Division, Code HA, Washington, D. C., 20546.

- (FICE Code book) Code Book for Compatible Statistical Reporting of Federal Obligations for Academic Science and Engineering.

Basic reference for identification and interagency data exchange coding for domestic colleges and universities. Available from University and Non-profit Institutions Study Group, National Science Foundation, Washington, D. C., 20550.

- (FMM) NASA Financial Management Manual. Part 9332

contains description of and operation guidelines for NASA's FACS (Financial and Contractual Status) EDP System. Limited availability. For information contact NASA Office of Financial Management, Code BF, Washington, D. C. 20546.

- (OE Directory) Education Directory, Colleges and Universities (Year). Lists all domestic colleges and universities with detailed descriptive information and certain EDP data exchange coding. Published by the Department of Health, Education, and Welfare, National Center for Education Statistics. Available from U. S. Government Printing Office.
- (NASA PR), NASA Procurement Regulations. Part 50.300 contains full details on assigning grant and contract numbers. For information contact NASA Procurement Office, Code H, Washington, D. C., 20546.
- Special Report Writer: A Flexible Information Management System by W. A. Greene. Users Manual and Systems Documentation for OUA-MIS quick-response report writer. Listed as NASA-TM-X-3346, Feb. 1974. Available from National Technical Information Service, Springfield, VA., 22161.
- (FIPS 5), Federal Information Processing Standard 5-1, States and Outlying Areas of the United States, June 15, 1970. Contains geographic codes for Government-wide use. Published by the National Bureau of Standards. Available from the U. S. Government Printing Office.

- OUA-MIS Programmers Guide. Complete OUA-MIS Technical Documentation. Limited Availability. For information, contact Office of University Affairs.

- Instructions and Specifications for Reporting Obligations to Academic Institutions and Selected Non-Profit Organizations. Contains technical EDP details on preparation and submission of CASE reports. Available from University and Non-profit Institutions Study Group, National Science Foundation, Washington, D. C., 20550

## I. Introduction

### A. Office of University Affairs (OUA) Responsibilities

The Office of University Affairs which reports directly to the Associate Administrator, is the agency's principal advisor in NASA's overall relationships with universities. The basic policy for NASA-University relationships is defined in NASA Policy Directive 8320.1, dated October 4, 1968. Background to the policy statement is as follows:

Universities are considered as partners with government and industry in the nation's aerospace program. NASA's objective is to have them bring their scientific, engineering, and social research competence to bear on aerospace problems and on the broader social, economic, and international implication of NASA's technical and scientific programs. It is expected that, in so doing, universities will strengthen both their research and their educational capabilities to contribute more effectively to the national well-being. NASA is expected to encourage and provide financial support for this university role. All of NASA's affairs should be conducted in a way that strengthens the universities' educational capabilities and assures maximum benefit to NASA and the universities.

Briefly, the policy is promulgated to:

- Encourage university participation in the nation's space and aeronautics program;
- Ensure relevancy to NASA's mission of university activities supported by NASA;
- Encourage and respect the autonomy of universities in management of their research and other activities relative to objectives, within the constraints mutually agreed upon by NASA and the universities;
- Encourage enhancement of the universities' traditional teaching and research mission and avoid contracting with universities to perform

types of work that do not directly and significantly contribute to both education and research;

- Encourage financial stability of supported university research via suitable long-term funding arrangements as appropriate to available funds and other circumstances.

Broad OUA responsibilities include:

- developing agency objectives and policies and prescribing procedure applicable to NASA activities involving relationships with universities;
- participating in the planning and review of activities involving relationships with universities that are sponsored by other NASA organizational elements;
- ensuring the availability of information required within NASA and by members of the public and private sectors on all aspects of NASA activities involving universities;
- evaluating and reporting on the agency-wide conduct of university relationships including the achievement of objectives and the effectiveness of applicable policies and regulations;
- representing NASA with other public and private agencies or groups on matters related to governmental relationships with universities.

This overview function is agency-wide, involving the activities of some 24,000 government employees and 17 agency installations throughout the United States. The external overview involves a large segment of the university community, viz., over 600 schools, conducting research on more than 8,000 projects valued at some \$1.8 billion.

To fulfill its responsibilities, OUA must maintain timely and accurate information, both quantitative and qualitative, on the total NASA-university relationship. For



this reason, the office developed the extensive NASA-University Management Information System (OUA-MIS). Thus, the Office of University Affairs Management Information System is the Agency's designated source and repository of management level information, data and analyses on the total NASA-university relationship. The OUA-MIS maintains an up-to-date profile of this "NASA-University Program" as a base for management decisions and overview and for providing specific details on current and past activities. In addition to meeting recurrent statutory and Executive Branch information requirements, the system is used to answer ad hoc inquiries from Congressmen, other agencies, universities, private sector organizations and individuals.

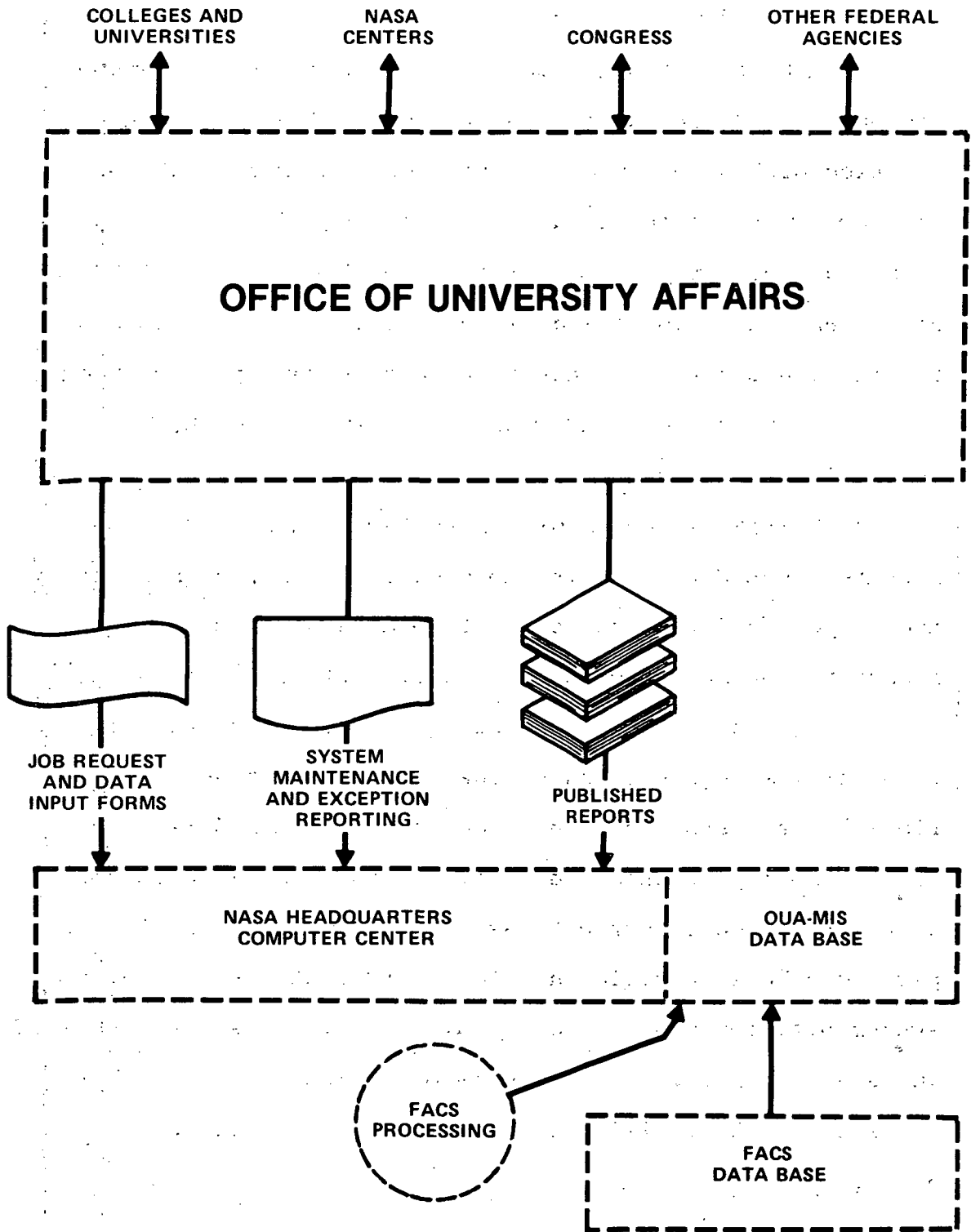
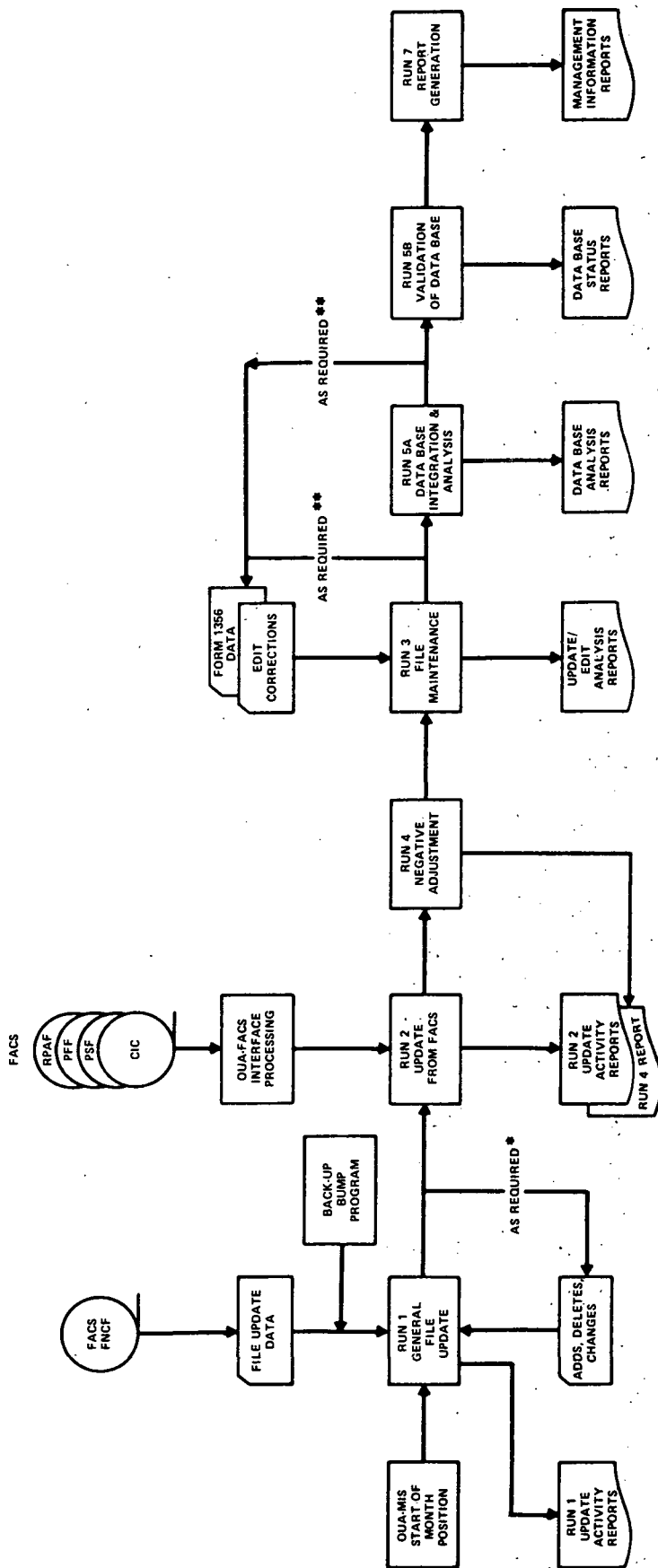


Figure 1. OUA-MIS ENVIRONMENT

## B. Overview of the System

OUA-MIS is an integrated management information system designed to operate under user request. There are capabilities within the system to edit OUA-generated data, interact with and select data from the agency-wide NASA Financial Accounting and Contractual Status System (FACS), update and maintain in a dynamic mode data on grants/contracts relevant to the university environment and produce a variety of cyclical and query-type reports on NASA's university activity.

As OUA-MIS is a user-driver system, OUA staff must prepare input data, submit these data for processing, review the output, and resubmit corrective data as required. In addition, OUA initiates the extraction of data from FACS, ensures that any adjustments or corrections are made to that data, integrates and validates the data base, and finally, requests the generation of the required reports. All of these processes are accomplished by pre-programmed system routines referred to as "runs." The runs must be performed in a specific and timely order to ensure maximum system efficiency and data validity. This order is described in detail in Section III, System Operations. The monthly operating cycle is illustrated in the flow chart included as Figure 2.



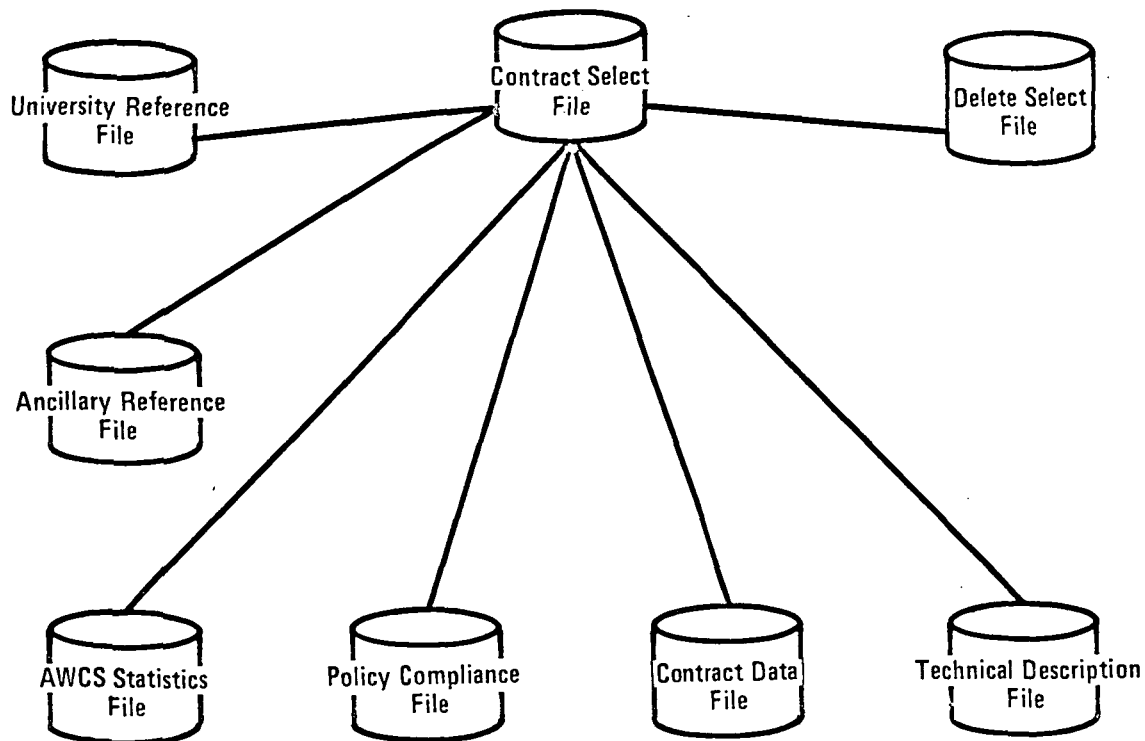
\* CAN BE EXECUTED ANY TIME DURING THE MONTH BEFORE RUN 5A IS PERFORMED  
 \*\* PERFORMED AS MANY TIMES AS NECESSARY PRIOR TO RUN 5B WHICH LOCKS UP THE DATA BASE FOR REPORT PRODUCTION

Figure 2. OJA-MIS MONTHLY OPERATING CYCLE

The system is designed to provide an ongoing capability for maintaining the data base and reporting the status of the system. This does not guarantee data validity for report purposes, but does guarantee the continuity of the system if an interim period of lack of control ever exists. That is, in the event that the person responsible for certifying the validity of the data for report purposes is not available to perform that function, the system can continue to be maintained by the staff responsible for preparing and processing the regular input. The system will have continuity and the reports can be produced with only a slight degradation in validity for an interim period until someone else becomes knowledgeable about the system and its data validity requirements.

The OUA-MIS data base is composed of eight interrelated data files which have different functions in the operation of the system. These are illustrated below to provide a concept of the structure of the data base.





The Contract Status File (CSF) is the major driver of the system as it contains the contract numbers for all the contracts of interest to OUA and therefore identifies the university contracts as opposed to the total universe of NASA contracts. Thus, the CSF is used to extract the appropriate contract data from FACS, whereas the Delete Select File (DSF) can be used to store identification numbers of contracts which are not of interest to QUA in order to prevent data from being extracted from FACS.

Four of the data files contain the information that comprises the individual contract/grant records. A particular contract/grant may have information stored in all four files. For data processing efficiency, the files are organized to contain similar types of data, i.e., the four

groupings of data are general contract information (CDF), statistical data (ASF), descriptive text data (TDF) and accounting data for internal monitoring of contract administration (PCF). The data for a contract in each file are linked together by a contract identifier; in OUA-MIS the identifier is the unique contract number. Thus, when data is retrieved from the data base all information with the same contract number can be pulled together from the four files using the contract identifier field. This is a somewhat simplified overview as, in fact, the files are arranged in a hierarchical structure and retrieval from the various files may involve use of other linking codes associated with a contract. Nevertheless, the contract number is stored with each data record for that contract and therefore is the main identification item.

The Ancillary Reference File (ARF) and the University Reference File (URF) contain descriptive data related to all the contracts. The ARF consists of eight look-up tables which are used to provide descriptive English for reports, e.g., installation names, edit data input and provide the internal mechanisms for sequencing data for reports. The URF contains all the names and addresses required for reports and the production of mailing labels. During the monthly processing cycle, the CSF is updated by OUA (submission of Form 1356 data) and by extracting data from FACS

during Run 1, General File Update. Contract numbers of new contracts are obtained from the FACS New Contract File (FNCF) and stored in the CSF. Contracts are selected based on pre-programmed criteria which allow all contracts relevant to OUA to be extracted.

At the same time, an OUA-MIS run program referred to as the bump program, causes a search to be made of other FACS files after the previous month's data has been edited. This ensures that any overlooked contracts or unusual conditions are reported to OUA.

When new contract numbers are added to the CSF space is automatically allocated in the other OUA-MIS data files for the contract data which is subsequently obtained from FACS during Run 2. In addition, FACS and OUA-MIS files are compared during Run 2 in order to obtain any changes made by FACS during their edit processing. These changes will overlay the data fields already in the OUA-MIS files. This is particularly important for the data in the AWCS Statistics File (ASF) to ensure that OUA-MIS is always current with FACS.

Run 4, Negative Adjustment, is performed at the same time as the update from FACS in order to adjust money figures. This adjustment changes the accounting/bookkeeping FACS bias to figures required for a management information system. The FACS figures are retained as well in order to

reconcile any problems but they are not used in the generation of reports.

Run 3, File Maintenance, can be performed at any time during the month but prior to validation of the data base. OUA staff use Run 3 to input data obtained from NASA Form 1356 submittals from installations and to submit any corrections as result of the system edit reports. Run 3 can be executed as many times as necessary to obtain valid and complete data files for the current month.

When all edit and corrective actions are completed, OUA requests run 5A which integrates the various data files and reduces them to two files which will be used to produce the management information reports. This reduction, which is transparent to the user, results in greater processing efficiency as it is only necessary to access one of the two files to produce particular reports. Run 5A analyzes these two files and provides edit reports to pinpoint any missing or inaccurate data fields which may have slipped through Run 3 edits or are the result of internal system errors. Corrective action can be taken (using Run 3) prior to final lock-up of the data base, Run 5B.

After the lock-up or validation is requested by OUA, the tapes are created from which the required reports are generated, (Run 7), and the monthly cycle is complete.

Run 6, Annual Start, is used at the beginning of the new fiscal year to purge data from the Policy Compliance File (PCF). This file contains statistics on Form 1356 submittals and the data for the previous year is not valid for management purposes in the new year.

### C. Structure of the User's Guide

This guide has been developed to acquaint the user with OUA-MIS, its capabilities, and its structure. In addition, the requirements placed on the user to exercise and maintain the system are identified. The guide should serve as a reference manual for training, as required, and to specify the internal procedures for the Office of University Affairs Staff in the continual process of building, updating, monitoring, and using the data base.

The guide is organized as a single volume composed of three major sections as follows:

- Section I -- Provides an overall introduction to the structure and purpose of the OUA-MIS. The Office of University Affairs responsibilities are discussed and the data processing cycle is defined. A system overview is provided which explains the rather complex flow of data and the interrelationships of the various data base files.
- Section II -- Presents a description of the content and purpose of each of the eight data base files that comprise the OUA-MIS. In a second part of this section each data element is defined and categorized as to the type of information provided by the element. The elements were treated in a separate section rather than as part of a description of each file as several of the elements are stored in more than one

file. Descriptions of many of the elements appear throughout the document but this section provides a central reference.

- Section III -- Describes the data processing run programs which are used to execute all the system operations in the order in which they occur during a normal monthly cycle. These runs are grouped by function as follows:
  - Creation and update of the master data files (Runs 1, 2 and 4).
  - OUA maintenance of the data base files (Run 3).
  - Data base integration and analysis (Run 5a and 5b).
  - New fiscal year annual start (Run 6).
  - Report production (Run 7).

For each of the runs and their associated options, three general areas are presented -- the purpose of the run/option, the method of requesting and preparing input for the run, and the output reports/effects of the run processing. The purpose section provides a general system description at a somewhat technical level, whereas the latter two areas provide the detailed instructions for OUA internal procedures.

An example of all the request forms, input transcripts and generated output reports are included in the guide, inserted as figures in the appropriate sections.

## II. DATA BASE CONTENT

The OUA-MIS data base is composed of three types of data: internal system control data, contractual data, and university data. Within these categories are subsets called data files. A file contains data that is similar in function and/or type, and can be logically grouped together. The data files which are contained in the OUA-MIS data base are as follows:

### Generalized System Data

- Contract Select File (CSF)
- Delete Select File (DSF)
- Ancillary Reference File (ARF)

### Contractual Data

- Contract Data File (CDF)
- AWCS Statistics File (ASF)
- Technical Description File (TDF)
- Policy Compliance File (PCF)

### University Data

- University Reference File (URF)

For processing convenience and efficiency, data associated with a particular contract are stored in several of the data base files. This data is linked by the file identifier, which in this system is the actual contract number. During report generation the required data for each contract can be pulled together by this common data element. In



addition, there are other elements (various codes) stored in the contract records which are used to access the look-up tables and extract the appropriate English for the reports. For example, the OUA code (which uniquely identifies each university) is used to extract the name of the university from the University Reference File. The OUA-MIS makes extensive use of look-up tables to obtain information (i.e., installation, CASE field, geographic location or university English) which is common to all OUA contracts, rather than storing the information in each contract file. The system was designed in this way as there can be a considerable amount of changes, e.g. university names, Congressional Districts, or NASA program offices names and codes, which would affect many contract records. The system has the capability of making such changes to the look-up tables alone, a relatively simple process; the codes in the contract records will then automatically be updated throughout the data base to reflect these changes.

A. Sources of OUA-MIS Data

Data is primarily derived from two sources: NASA Form 1356 submittals from field installations and Headquarters Program Offices and information extracted from the Financial Accounting and Contractual Status (FACS) System.

1. NASA Form 1356

NASA Form 1356 data is submitted by NASA field

installations which have procurement authority. An example of this form is shown as Figure 3. The legal or administration form of this procurement is that of a grant or contract. OUA has responsibility for tracking the status of all contractual information regarding these grants and contracts and the NASA Form 1356 is the main data collection device utilized.

The NASA Form 1356 has three major divisions. They are:

- Part I -- Technical Data
  - University name
  - 1st, 2nd, 3rd principal investigator (employee of university doing work)
  - Main objective of work
  - Field of science or engineering
  - Med school ID
  - Primary and alternate technical officer name; installation and mail codes (responsible NASA observer)
- Part II -- Procurement Data
  - Grant/contract number
  - Modification number
  - Amount obligated
  - Cost-sharing percentage
  - Type of action
  - Grant/contract title or brief description
  - Proposal received date
  - Start date--this action
  - End (completion) date
  - Obligation date
- Validation
  - Signature of approving official (NASA)
  - Date
  - Procuring installation

The NASA Form 1356 is forwarded to OUA at NASA

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
C.A.S.E. REPORT ON COLLEGE AND UNIVERSITY PROJECTS**

**PART I - TECHNICAL DATA (To be completed by procurement request initiators)**

Procurement request initiators are required to complete part I and to include this form with their procurement requests (PR's) for certain obligations to educational institutions. Forms need not be submitted with all PR's; for details, see the brief instructions on the back of this page.

**PLEASE TYPE OR PRINT LEGIBLY. ATTACH COMPLETED FORM TO PROCUREMENT REQUEST.**

1. UNIVERSITY NAME, CITY AND STATE		3. PRINCIPAL INVESTIGATOR (Two initials and surname)	
-----		4. SECOND PRINCIPAL INVESTIGATOR (If any, two init. and surname)	
2. PROPOSAL NO.		5. THIRD PRINCIPAL INVESTIGATOR (If any, two init. and surname)	
6. PRIMARY NASA TECHNICAL OFFICER (Two initials and surname)		7. INSTALLATION NAME	8. MAIL CODE (HQ only)
9. ALT. NASA TECHNICAL OFFICER (If any, two initials and surname)		10. INSTALLATION NAME	11. MAIL CODE (HQ only)
12. WILL THIS PROJECT BE CONDUCTED IN OR BY A MEDICAL SCHOOL? <input type="checkbox"/> YES <input type="checkbox"/> NO			
13. MAIN OBJECTIVE OF WORK (Circle one code)	R&D ▶	11 BASIC RESEARCH	12 APPLIED RESEARCH
	OTHER ▶	06 OTHER ACTIVITIES RELATED TO SCIENCE AND ENGINEERING	09 R & D PLANT & EQUIPMENT
			13 DEVELOPMENT
14. FIELD OF SCIENCE OR ENGINEERING (Circle the one code number which represents the most appropriate field. See instructions on reverse)			
<u>PHYSICAL SCIENCES</u>	<u>ENVIRONMENTAL SCIENCE</u> (Terrestrial and extraterrestrial)	<u>ENGINEERING</u>	<u>LIFE SCIENCES</u>
11 ASTRONOMY		41 AERONAUTICAL	51 BIOLOGY
12 CHEMISTRY		42 ASTRONAUTICAL	52 CLINICAL MEDICAL
13 PHYSICS		43 CHEMICAL	53 OTHER MEDICAL
19 PHYSICAL SCIENCES, NEC*	31 ATMOSPHERIC SCIENCES	44 CIVIL	59 LIFE SCIENCES NEC*
	32 GEOLOGICAL SCIENCES	45 ELECTRICAL	61 BIOLOGICAL
	33 OCEANOGRAPHY	46 MECHANICAL	62 SOCIAL ASPECTS
<u>MATHEMATICS</u> *	39 ENVIRONMENTAL SCIENCES, NEC*	47 METALLURGY AND MATERIALS	68 PSYCHOLOGICAL, NEC*
21 ANY DISCIPLINE(S)		49 ENGINEERING, NEC*	69 PSYCHOLOGICAL, NEC*
			72 ECONOMICS
			73 HISTORY
			74 LINGUISTICS
			75 POLITICAL SCIENCE
			76 SOCIOLOGY
			79 SOCIAL SCIENCE NEC*
			89 ALL DISCIPLINE(S)
			92 TRAINING GRANT (NGT prefix only)
			99 OTHER SCIENCES **
* Not Elsewhere Classified (For interdisciplinary projects and others not listed by discipline name)			
** For interdisciplinary projects which cannot be classified within any of the preceding main fields			

**PART II - PROCUREMENT DATA (To be completed by procurement office. See instructions on last page)**

15. AGREEMENT NO. (Including prefixed letters)			16. MOD. NO.	17. AMOUNT OBLIGATED	18. COST SHARING PERCENTAGE
19. TYPE OF ACTION BEING REPORTED (Circle one code number)					
1 NEW AWARD (New grant/contract/Co-op. agree.no.assigned)		2 ADDITIONAL FUNDS, SAME DURATION (Excludes incremental funding)		3 ADDITIONAL FUNDS AND TIME (Excludes incremental funding)	
4 NO-COST TIME EXTENSION		5 CHANGE IN PRINCIPAL INVESTIGATOR OR TECHNICAL OFFICER		6 INCREMENTAL FUNDING (Applies only to contracts conforming to PR 7,204-53)	
20. GRANT TITLE OR BRIEF DESCRIPTION OF TECHNICAL PURPOSE OF AGREEMENT (Required only for new awards)					
-----					
-----					
21. PROPOSAL RECEIVED		22. START DATE THIS ACTION		23. END (Completion) DATE	
a. MO	b. DAY	c. YR	a. MO	b. DAY	c. YR
24. OBLIGATION (Last signature)					
a. MO	b. DAY	c. YR			
25. AD HOC DATA		26. VALIDATION BY RESPONSIBLE INDIVIDUAL: COMPLETED AND CHECKED.			27. SEQUENCE NO. (OUA use only)
a	b	c	d	e	f
g	h	i	j	k	l
		a. NAME	b. MO	c. DAY	d. YR
			e. INSTALLATION		

NASA FORM 1356 MAY 75 PREVIOUS EDITIONS ARE OBSOLETE.

RCS10UMIS00143

(LIFT HERE: PART I INSTRUCTIONS ON BACK OF THIS PAGE)

1 - ORIGINAL

\* The revised NASA Form 1356 will contain the following categories:  
Mathematics and Computer Sciences  
21 Mathematics  
22 Computer Science  
29 Mathematics & Computer Sciences, NEC

Figure 3. NASA Form 1356

Headquarters, where this information is transferred to an input transcript and submitted for data processing.

2. The Financial Accounting and Contract Status System Data

The Financial and Contractual Status (FACS) System data base is the second primary source of contractual data for OUA-MIS. The FACS System maintains a NASA-wide data base of current and cumulative (inception to date) fiscal year financial and current fiscal year descriptive contractual information. At present, the FACS System and one of its satellite support subsystems, the Contractor Identifier Code (CIC) System, constitute the external sources to OUA.

Five processing files provide all necessary FACS information required by OUA. These files include the FACS New Contract File (FNCF), Procurement Financial File (PFF), Procurement Status File (PSF), Reportable Procurement Actions File (RPAF), and Contractor Identification Code (CIC) File.

The three FACS master files (PFF, PSF, and RPAF) are matched against the OUA-MIS Contract Select File (CSF) by contract number. (The CSF is updated monthly by the FACS new contract file in a previous run.) An equal match identifies a FACS record which is OUA related and should be passed to the data base

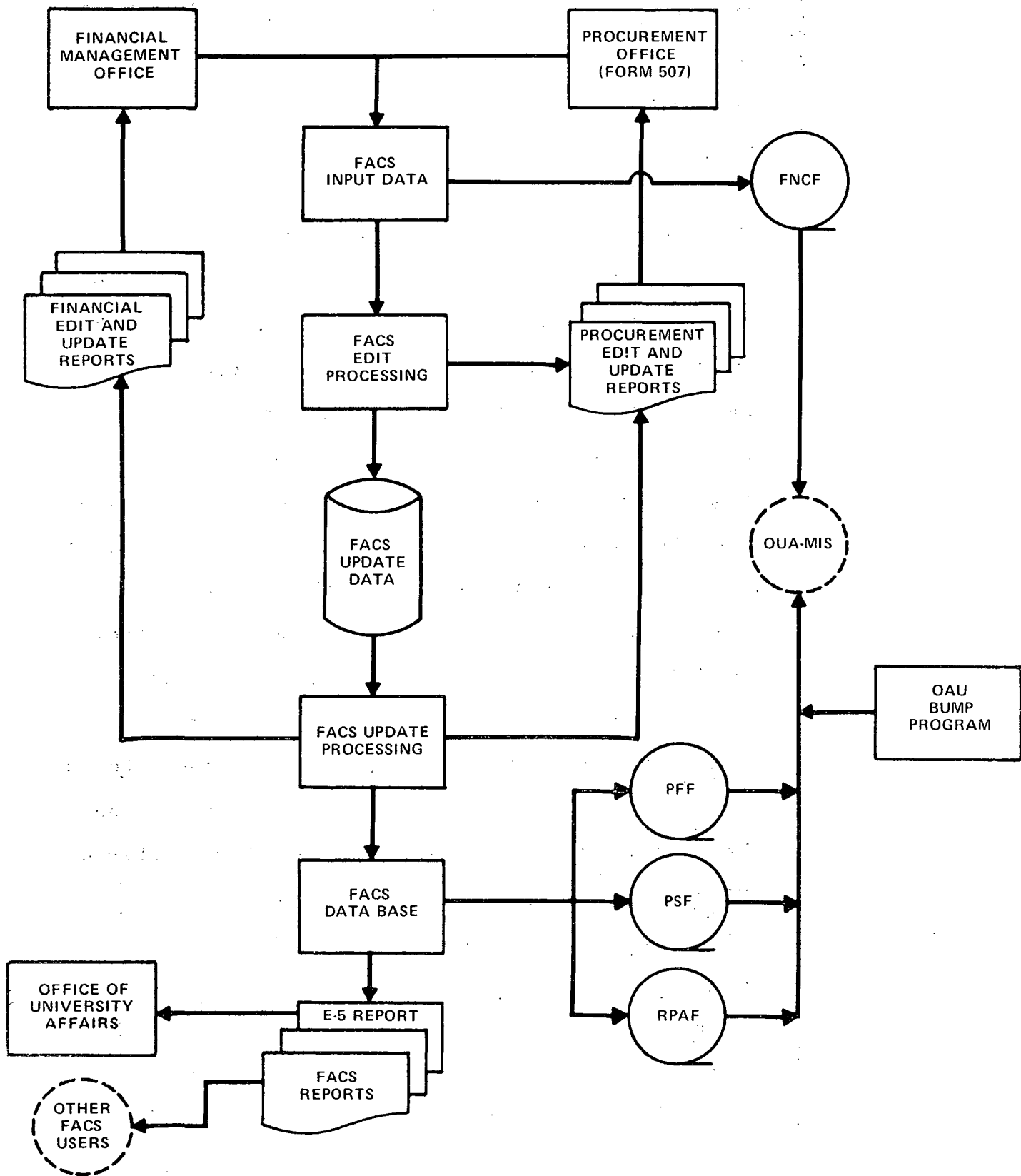


Figure 4. FACS-OUA DATA FLOW

processing files. The three FACS master files are processed through run 2, update from FACS. The FNCF is processed in run 1, general file update.

#### FACS New Contract File (FNCF)

This file serves as the basic interface between FACS and OUA-MIS. During FACS edit processing, all grants/contracts added to the FACS data base cause a corresponding entry to be added to the FNCF. The grant/contract number, CIC number, PPC code, and contractor name English are taken from the FACS contract transaction input date. The alpha code, Congressional District, and business type are taken from the current CIC file. The current date is also placed in the output record. Each time run 1, general file update, executes with the CSF option, the FNCF is used as input to update the Contract Select File (CSF). The CSF will not accept new records for contract numbers which have been entered by OUA in the Delete Select File (DSF) even though the contract appears to meet OUA selection criteria. OUA has previously determined that these records are not required for inclusion in the OUA-MIS data base.

#### Procurement Financial File (PFF)

The PFF is processed by an OUA program which extracts information to update the Contract Data File and the AWCS Statistics File. After matching

grant/contract numbers, an ASF record is created for each PFF record which has a valid AWCS code. There is a back-up function for this program which identifies and reports any contracts included in FACS and the CSF for which there is no financial data available in the PFF. This provides OUA an opportunity to pinpoint errors and missing data in FACS which would affect the accuracy and completeness of the OUA-MIS data.

#### Procurement Status File (PSF)

The PSF is processed by an OUA program which extracts data to update the Contract Data file. Included in these extract data are the grant/contract number, CIC, procurement placement code, FACS status, extent of competition, type of effort, contract end date, contract start date, procuring installation, and estimated cost.

#### Reportable Procurement Actions File (RPAF)

The RPAF is processed by an OUA program which extracts data to update the Technical Description File. After matching grant/contract numbers, two TDF records are generated for each selected RPAF record. Each update record contains a 50-character portion of the technical description of a contract.

#### Contractor Identification Code (CIC) File

The Contractor Identification Code subsystem

is used to identify and report on all NASA prime contractors and subcontractors. A unique code (CIC) is issued for every combination of contractor name, contractor division, contractor address, and place of performance. This system is maintained by the Headquarters procurement office and directly supports the Financial Accounting Contractual Status (FACS) System.

Run 5 of the OUA-MIS process passes the CIC file against the Contract Data File (CDF) to generate an extract of Congressional District and alpha code for the purpose of updating the CDF.



B. Data Base Master Files

1. Generalized System Data

a. Contract Select File (CSF)

The Contract Select File (CSF) is the basic driver of the OUA-MIS. Every contract number of concern to OUA, whether the contract is active or completed, is uniquely represented on this file. All major system processing steps which require access to a list of OUA contracts reference this file. For example, the CSF data can be used to periodically run against the entire Financial and Contractual Status (FACS) system data base to ensure that all contracts of interest to OUA are included in the OUA-MIS. In addition, all system data base updating activity at the contract level is initiated through this file. In this instance, the CSF is run against the entire FACS data base and selects financial and procurement data available for the contracts listed in the CSF. This financial data is then deposited in the appropriate OUA-MIS files constructed to contain such data. The CSF provides the only linkage between OUA-MIS and the FACS system.

b. Delete Select File (DSF)

The DSF contains contract numbers for any

contracts which OUA does not want included in the OUA-MIS data base. The inclusion of the numbers prevents extraction of pertinent data from the FACS data base during interface runs.

The contract numbers can be added to the DSF either directly by OUA, using a transcript for submittal, or the numbers are added automatically when a contract number is deleted from the Contract Select File (CSF). Numbers will remain on the file as long as the contracts are in FACS or until OUA removes the number if a later decision is made to include the contract in OUA-MIS. Deletion of the contract from FACS will automatically remove the contract from the DSF.

The DSF is active whenever the CSF is used to interface with FACS, i.e., when data is extracted from the FACS New Contract File or from the entire FACS data base.

A list of all the contracts currently in the DSF will print out as one of the reports generated during OUA updating of the CSF and during FACS interface updating.

c. Ancillary Reference File (ARF)

This file consists of data sets referred to as tables. The tables contain data used to

edit input, provide descriptive English for generated reports, and define sort keys which are used to access and appropriately sequence data for reports. The ARF is updated, as required, to maintain the table data on a current basis in order to ensure an accurate edit function and generation of reports.

The tables which make up this file are briefly summarized below. Formatted lists of the information contained in each table are shown as Appendix A.

Table 01 - Accounting, Procuring and Technical Officer Installation

The data in Table 01 are used to edit input of installation codes, provide installation name English for reports, and relate program office acronyms to installations. A sort key for each installation is also defined in Table 01. (Sort keys are also in Table 08 and on the OUA-MIS sort key list which follows Table 08.)

The sort keys, four digit numeric codes, arrange NASA installations alphabetically, excluding Headquarters, for report production. For Headquarters, they provide two different sort sequences; alphabetically by Headquarters Mail Codes or alphabetically by Mail Code

within major program office groupings. In addition, there is the capability of alphabetizing the centers along with Headquarters division mail codes under major program offices (if NASA goes back to centers reporting through specific program offices.) The sort keys in Table 01 provide a matrix-type file relationship, i.e., they group data elements pertaining to a contract by relating the sort key and the accounting (and procuring) installation two-digit numeric codes, the full center name English, the 5-position installation acronym, and the former program office to which each center reported. The Table 08 sort keys (for Headquarters divisions) provide a matrix relationship between each sort key and the cognizant office fiscal accounting code number, the program office name and abbreviation, the Headquarters mail code and the division name. (For a further explanation of sort keys refer to section III., Ancillary Reference File Table Updates.)

There are "use flags" associated with occasionally required special operations, such as rolling up basic research, applied research and development into a single category; identifying

dis-established NASA installations and highlighting limitations in the use of certain codes. These flags are not hardcoded in the table and may be changed as internal system processing considerations change. Such changes, however, are rarely necessary.

Table 02 - CASE Main Objective of Study Text

The data in Table 02 are the CASE (Committee on Academic Science and Engineering) codes which generally define the objective of a project. These codes have been specified for government-wide use (OMB Circular A-46) and are not subject to update by an OUA-MIS user.

Table 03 - CASE Field of Science and Engineering

This table contains descriptive English for each CASE field and subfield. The table is not currently used for report generation as the text English can now be accessed from Tables 04 and 05 discussed below.

Table 04 - CASE Field of Science and Engineering Grouping

This table contains the codes and English for the eight CASE major field groups, e.g., physical sciences, life sciences, mathematics, etc.

Table 05 - CASE Subfield Titles

For the eight CASE Major field groups,

there are 34 subfields. Table 05 contains the codes and English for these subfields.

Table 06 - State and Region Codes and English

Table 06 contains state codes and English, and the associated geographical region codes for each state. This table is primarily used in report production. The first three-digits of the OUA code assigned to each University are the three-digit state codes stored in this table. During report generation, the state code is extracted from the OUA code which, in turn, is used to access state abbreviations, names or region codes from this table for report English labelling, as required by the report format.

Table 07 - Geographic Region Codes & Names

Table 07 provides the English for the geographic regions which is accessed and used for generated reports.

Table 08 - COG/Program Office, Mail Code and Sort Key

The table contains information on NASA Headquarters program offices and divisions which are responsible for the funding of assigned contracts. As such, the program offices perform monitoring functions for the projects within their jurisdiction. The table includes such

items as the Cognizant Office Code, the abbreviation for each program office, the mail code for each office, etc. As described in the narrative on Table 01, there is a unique sort key for each program office/division used to sort and sequence data for report generation.

Following Table 08 there is a "sort key list" produced as part of the ARF printout which displays the keys sorted numerically by the last three digits of each key. These digits are used to alphabetize the centers and Headquarters division. (The first digit of each key represents the program office.) This list can be used to quickly locate the desired position for a new office and assign an alphabetizing sort key.

## 2. Contractual Data

### a. Contract Data File (CDF)

The Contract Data File contains records with basic descriptions for each individual grant/contract of significance to OUA. All the contracts contained in the CDF are also contained in the CSF; therefore, one record contains data elements unique to one particular contract. In addition to the descriptive elements, each CDF record contains historical financial information.

This includes all current fiscal year and cumulative obligation and disbursement amounts. These data are maintained for the current and previous 5 years. Other information includes identification of the responsible principal investigator (university representative) and the technical office (NASA's representative.)

The CDF data set is updated by means of extract files from four data sources. These sources are the FACS Procurement Status File, FACS Procurement Financial File, Form 1356 Data File, and File Maintenance Data File. (This latter file is used to perform updating or deletion operations--considered as two functions or options).

Note that there is a meaningful relationship between the CDF and the University Reference File (URF). The CDF is linked to the URF by means of the OUA code. The OUA code within a CDF record points to a university on the URF, thereby matching a specific grant/contract with its university. There is usually more than one grant/contract for a university.

b. AWCS Statistics File (ASF)

The AWCS Statistics File maintains a record of funding activity at the AWCS-SUB1 level for all grants/contracts of significance to OUA.



The AWCS-SUB1 level refers to FACS figures broken down by fund sources and program years which have been rolled together in order to reflect the actual current year obligations as required for OUA-MIS use. These unique records are used primarily to supply financial funding information for the production of all reports containing money data.

The financial information consists of current fiscal year and cumulative (inception to date) obligation and disbursement monies. These data are grouped in the file by contract number, accounting installation, cognizant office code, and AWCS (UPN/SRT/Subtask 1).

A further presentation of the obligation money is referred to as the OUA CFY obligation report value. This field was developed to allow for translation of negative funding figures (often characteristic of FACS accounting system data) into actual obligation amounts as required for OUA-MIS reports.

During end-of-month processing, the financial data are summarized by contract number and transferred to corresponding fields in the CDF.

c. Technical Description File (TDF)

The Technical Description File contains textual, narrative descriptions for each contract monitored by OUA. These descriptions are used primarily for supplying English descriptions for the OUA-MIS reporting subsystems, especially the Greenbook report.

Textual descriptions are supplied from the FACS System. These descriptions are accepted only once from FACS and cannot be modified on the TDF, except through user intervention. These descriptions are edited by OUA to ensure accuracy and completeness for report production.

d. Policy Compliance File (PCF)

The Policy Compliance File is used to maintain information from NASA Forms 1356 submitted during the current fiscal year. There may be multiple records by unique modification number for each contract occurring as a result of amendments to the original contract.

The PCF is primarily used for reporting purposes by the DANALYST reporting subsystem and to provide a count of the number of Forms 1356 received. One of its functions is to assist in monitoring the expiration and renewal of contracts on a timely basis. This allows the interested parties to react with enough

lead time to resolve any contractual performance and administrative complications. It also contains the basic cost sharing information.

Note that at the start of a new fiscal year's processing, only the basic contract records plus modifications with a start date beyond the beginning of the new fiscal year (Oct. 1) are constructed into the new year's PCF.

### 3. University Data

#### a. University Reference File (URF)

The University Reference File contains information on those universities that are currently doing, or in the past have done, business with NASA. Each record contains a unique OUA code that identifies a specific university. The OUA code is utilized as a key to retrieve records from the URF. The type of information included in a URF record is names and addresses of responsible individuals, type of school, mailing addresses, and various other university-descriptive data elements.

The URF also has a peripheral capability of storing information on non-universities to be used merely for the protection of special mailing lists.

The URF provides the basic source of information for the UNICODE and UNILIST reporting subsystems. In addition, it provides supplementary input to a number of other report subsystems.

This file is linked to the CDF by a common OUA code. This provides a method of linking all related CDF contract information sets to a specific university.

The URF is maintained on a current basis exclusively through user-supplied updates. The OUA codes can be changed through means of a special program which also adjusts the corresponding codes in the CDF, thereby maintaining the desired relationship.

This URF maintenance is critical to proper system operation as the file defines for all of NASA those organizations which the agency considers to be colleges and universities. In addition, the various sets of coding uniquely identify individual institutions for inter- and intra-agency data exchange with the National Science Foundation (NSF File Code), the Department of Health, Education and Welfare (OE File Code), and within NASA, the FACS system (Alpha Code).

FACS operating personnel consult with OUA before coding new educational institutions into the CIC system, while OUA coordinates with NSF before adding a new school to the URF or changing a school name to reflect such common events as consolidation, creation of university systems, achievement of independent campus status, etc.

### C. Data Elements

In this section, each of the data elements contained in the OUA-MIS data base are defined. They are grouped together by type of information categories as follows:

- Coding and Contract Identification Data
- Text Data
- Financial Data
- Identification Flags
- Dates

It should be noted that many of the data elements are contained in more than one data base file. In addition, there are some elements that are obtained from FACS but are not actually used by OUA-MIS except for internal processing. Where appropriate, this is noted in the description.

#### 1. Coding and Contract Identification Data

##### Accounting Installation Code

Each NASA installation responsible for reporting financial activity for a contract is represented by a two-digit numeric code. These codes and the installation name English are stored in the Ancillary Reference File (Table 01).

##### Action Code

A code is entered on all data input transcripts in column 78 to designate the required data processing action, as follows:

A = add data  
C = change data  
D = Delete data

#### Alpha Code

A seven character alpha-numeric code assigned by the Procurement Office to each contractor organization. The first character is alphabetic and represents the first letter of the organization name. The next four numeric characters are the unique organization code and the last two numeric digits specify the division. (For universities these last two positions are not used for sorting, they are zero-filled.) The alpha codes are stored in the FACS Contractor Identification Code File (CIC) and are used to place the File in alphabetical order. The codes are extracted from FACS and stored in the OUA-MIS data files. Their main use is internal to the system, i.e., they are used to extract data for report generation. In at least one instance, they are used to alphabetize a major report: Ames Obligations, all tables.

#### CASE Field of Science Codes

These are numeric codes for the eight major fields, e.g., physical sciences, life sciences, mathematics, etc., which are used to categorize each project. The code is obtained from NASA

Form 1356 submittals and input to the Contract Data File. The codes and associated English descriptions are hard coded in the Ancillary Reference File and are used to supply report headings.

#### Case Objective Code

These codes are used to categorize the main objective of a project. The codes are obtained from NASA Form 1356 submittals and input to the Contract Data File. In addition, the CASE Codes and associated English descriptions are hard coded in the Ancillary Reference File and are used to supply report headings.

#### Congressional District Code

The two-digit numeric code representing the geographic location of each university is stored in the University Reference File.

#### Contractor Identification Code (CIC)

A seven-character code which uniquely identifies a contractor name, division, address and place of performance. These codes are initially stored in the FACS CIC file and made available to OUA-MIS through an interface process. Standard codes for each unique combination of these variables are contained in the publication entitled "NASA Contractor Identification Codes," issued quarterly



by the Headquarters procurement office. See also FMM 9332-43(b.)10. If a new CIC is needed, the Headquarters procurement office is contacted by the installation's procurement personnel.

#### Contract/Grant/Purchase Order Number

A number assigned by the installation procurement office to uniquely identify each contract, grant, cooperative agreement, or purchase order. For full details on construction and assignment of these numbers see NASA Procurement regulations (P.R. 50.300).

#### Contract Status Codes

For each contract there is a status code carried in both the OUA-MIS and FACS data base. These codes specify whether a contract is defined as "active" or "completed". The OUA coding and the FACS coding are related but are stored as two separate codes. OUA status codes are system-generated and the codes do not appear on reports, with one exception: The Greenbook shows the current OUA status code assigned to each contract.

The determination of the status of a contract at any moment in time is at best an estimate. "Active" has different meanings to various groups, e.g., technical officers, procurement people, lawyers, or property people. Furthermore, the data necessary

to determine the status may be missing or inaccurate. In addition, "active" status is viewed somewhat differently by FACS which represents an accounting system and OUA-MIS which seeks to capture an approximation of the number of technically active contracts. FACS codes are retained in the data base to meet any request for statistics comparable with the FACS data base.

Certain criteria have been established as part of the OUA-MIS to assign active or completed status to contracts. The status is automatically updated monthly. Where the status is ambiguous or debatable, projects are designated "active" rather than completed.

In the OUA-MIS, projects which are active at some time during the current fiscal year are assigned the status code, "1". All other projects are coded as "3" for "completed". An "active" status is assigned if one or both of the conditions below are met:

- The ending date has not passed. (Since projects are rarely fully completed from a technical standpoint by the ending date, a grace period is allowed. Thus, grants are listed as active for 6 months past their nominal ending date; for contracts the grace period is 4 months.)
- There has been an obligation or disbursement of funds during the fiscal year. (This compensates for erroneous ending dates. This rule does not operate if the ending

date is 2 or more years past. In this manner, adjustments during closeout will not cause a project to appear as active.)

The above criteria are bypassed if the Procurement Office enters a "physically completed" status in FACS for a particular contract. The status will be accepted and OUA status will automatically be assigned as "3" for "physically completed".

It should be noted that as a result of contracts being automatically regarded as "physically complete" when the end date is 2 or more years past or when the FACS-assigned complete status is accepted by OUA, reports listing active contracts only will generally show a slightly smaller "fiscal year obligations" total than reports listing all contracts on which there were FY obligated funds.

FACS uses two types of coding for the determination of contract status:

- Financial

<u>FACS STATUS CODE</u>	<u>NAME</u>	<u>DEFINITION</u>
1	Active	Obligations, costs and disbursements are not equal* or there are current fiscal year obligations, either negative or positive.
2	Inactive	Obligations, costs and disbursements are equal* and

there are no negative or positive current fiscal year obligations.

3      Completed      Contract meets status 2 criteria on the last day of the fiscal year. It becomes status 3, effective with the new fiscal year.

\*Within \$10

● Procurement

<u>FACS STATUS CODE</u>	<u>NAME</u>	<u>DEFINITION</u>
Y	Yes	The Procurement Office periodically specifies whether or not contracts are "physically completed" and the Y or N code is included in the data base. (In the OUA system "Y" contracts are entered into the data base as FACS Code "4", and then the project is regarded as "complete". This replaces codes 1-3, if already present. "N" is ignored.)

If FACS Procurement makes an error in designating a contract as "physically completed", this can be highlighted by a report generated in Run 7. The report contains contracts with an illogical combination of factors, e.g., a contract given a completed status which has an assigned ending date sometime in the future. These instances can be manually reviewed and corrected, if necessary.

Current Year RTOP

This field is no longer used; ADP routines for generating it have been removed from system.

#### Extent of Completion Code

The codes are extracted from FACS and stored in the Contract Data File. They are not currently used by OUA-MIS but the data field is reserved for any future use. (For details see FMM 9332-43(b.)20.)

#### Future Funding Code

This field is not in full use. Only a few OSS NGL grants and former SUP projects have been coded "NN" which means the project will not be renewed. Other codes must be defined to fully make use of this field. The codes are OUA file maintenance input only.

#### Headquarters Mail Codes

The alphabetic, 1-2 character mail codes for each program office division in NASA Headquarters are stored in the Ancillary Reference File as part of Table 08. (Headquarters codes may be as large as 5-position alphanumeric. The OUA-MIS only uses the first two positions which are always alphabetic; however, a blank is permitted in position 2.)

#### Kind of Action Code

A two-digit code extracted from FACS which identifies in general terms, the kinds of procurements and the action taken to initiate the procurements or modification. Not currently being used in OUA. (For more detail see FMM 9332-32(a.)9.)

### Method of Authorization Code

These codes are extracted from FACS and stored in the Contract Data File. They are not currently used by OUA-MIS but the data field is reserved for any future use. (For details see FMM 9332-32(a.)9.)

### Minority School ID Code

If a school is classified as a minority institution one of the following codes is input by OUA:

N = Black

C = Spanish Speaking

A = American Indians

H = Hispanic

W = Women (only if none of the above categories apply).

### Modification Number

A unique number assigned by the procurement office for any modification made to a contract as evidenced by a Form 1356 submittal from an installation.

### NSF FICE Code

This is a National Science Foundation inter-agency data exchange code used to uniquely identify a school. The codes are contained in the FICE code book.

### OAST Relevance Code

A two-digit code, defined in FACS, which is

stored in the CDF. Not in current use.

OE FICE Code

An interagency data exchange code obtained from the OE directory. (Currently, space is reserved for possible future use of these codes.)

OUA Code

An eight character code used to uniquely identify universities. Each code has a three-character prefix used to specify the geographic location of the university. 001 to 059 codes represent the States within the U.S., 060 to 099 identify U. S. possessions, and codes with the first digit greater than zero are used for foreign countries. The five-character suffix is a numeric sequence assigned by OUA for identifying the particular university within the prefix location. A sort on the OUA code produces an alphabetized listing by country (U.S., U.S. Possessions, Foreign) state and institution.

Procuring Installation Code

The NASA installation which physically accomplishes the procurement is represented by a two-digit numeric code. These codes, stored in the Ancillary Reference File (Table 01) and Contract Data File, are the same codes used to designate

the accounting installation.

Procurement Placement Code

A two-digit code assigned to categorize the type of organization from which a procurement is made. These codes are obtained from FACS and stored in the Contract Data File. The codes are used for internal system processing and do not appear on any reports. (For details see FMM 9332-46).

Security Classification

This field is currently not in use but is available for future application. Standard security classifications are represented by alpha characters as follows:

U = Unclassified

C = Confidential

S = Secret

T = Top Secret

The codes are OUA file maintenance input only.

Step Funding Status

This field is reserved for future use. Alpha or numeric codes (not yet defined) can be entered to indicate the status of step-funded grants. These codes are OUA file maintenance input only.



### Training Object Class

Training objective is a classification field obtained from FACS. It is no longer used in OUA-MIS.

### Type of 1356 Action Code

Block 19, of NASA Form 1356 provides the type of action code for each form submitted, i.e., the code indicates the purpose of the submission. The codes, which are stored in the Policy Compliance File, are as follows:

- 1 = New Award
- 2 = Additional Funds, Same Duration
- 3 = Additional Funds and Time
- 4 = No-Cost Time Extension
- 5 = Change in Principal Investigator or  
Technical Officer
- 6 = Incremental Funding

### Type of Business Code

A one-digit alphabetic code stored in the FACS CIC system which identifies the kind of contractor the associated CIC number represents. The coding is as follows:

- I = Intragovernmental (other agency)
- L = Large Business
- N = Non-profit
- O = Outside U.S.

S = Small Business

U = Educational Institution (95% of which  
are colleges and universities)

Type of School Code

A two-character code used to classify each  
school as follows:

GR = Public, State Related

GF = Public, Federal

GS = Public, State

GL = Public, Local

GC = Public, State and Local

PN = Private, Organized as Profit Making

PD = Private, Affiliated with Religious  
Groups

These codes, established by the Office of Educa-  
tion, can be obtained from the OE Directory for  
Colleges and Universities. The codes are stored  
in the URF.

2. Text Data

CASE Field of Science and  
CASE Objective English

The English for the CASE fields and objectives  
is stored in the Ancillary Reference File and used  
for headings in the CASE and Greenbook Reports.

Contract Description

Four lines of English describing the nature of  
of the project are stored in the Technical Descrip-

tion File. These data are used for the Greenbook and RTOP Analysis Reports.

COG Name

The name English for each Headquarters office responsible for program management which is stored in the Ancillary Reference File and used to supply report headers.

Geographical Data

The English for each country, State, and geographical region is stored in the Ancillary Reference File and is used to provide headers for reports.

Installation Name and Abbreviation

The name of each NASA installation and an abbreviated version are stored in the Ancillary Reference File and are used to produce the English for reports.

Principal Investigator Data

The names and universities for up to three principal investigators associated with each contract are stored in the Contract Date File and are used in generation of the CASE, Greenbook and Headquarters Renewal Reports.

Program Office Names and Abbreviations

The names and abbreviations for each Headquar-

ters program office, as well as abbreviations for each division within the offices are contained in the Ancillary Reference File for use as report English.

#### Student Enrollment

The student population for each school (obtained from the Office of Education Directory) is stored in the University Reference File and used for special purpose reports.

#### Technical Officer Data

English text including the primary and alternate Technical Officers names, name of installation and mail codes are stored in the Contract Data File and used for report generation (Greenbook and Headquarters Renewal).

#### University Name

The full University Name and a shortened version for each school are stored in the University Reference File and are used to supply English for the Greenbook Report, for mailing label production, and wherever else the names are needed.

#### University Presidents, Business Managers and Research Coordinators Data

The names, titles, addresses and telephone numbers for these personnel are stored in the University Reference File. The data is used to

produce the Unilist mailing list and mailing labels.

### 3. Financial Data

#### Cost Sharing Amount

Amount of funds contributed by contractor to project during current fiscal year (This is a very specialized field. See Ames Special Report Writer document., P. 73).

#### CFY1 - CFY5 and Cum 1 - Cum 5 Obligations and Disbursements (OUA values)

Contract level data stored in CDF used to produce data rolled up to the institutional level for the most recently completed 5-year period. These fields are no longer used and subsequent system changes have severely limited the accuracy.

#### CFY1 - CFY5 and Cum 1 - Cum 5 University Obligations and Disbursements (OUA Values)

Forty URF file fields originally intended to produce a roll up, as above. No longer used for the same reason.

#### CFY Disbursements

Current fiscal year disbursements on the AWCS Statistics file as taken from FACS. File identification is the complete contract number, COG Office Code, Accounting Installation Code and the 7-11 digit AWCS Code.

CFY Obligations (FACS)

Current fiscal year obligations on AWCS file taken directly from FACS. File identification is complete contract number, COG Office Code, Accounting Installation Code and the 7-11 digit AWCS Code.

CFY Obligations (OUA)

Current fiscal year obligations on AWCS file as adjusted by OUA from FACS. These are the normal values used in all OUA output reports. File identification is as above.

Cum Disbursements (FACS)

Cumulative disbursements since inception of the contract.

Cum Disbursements (OUA)

Same as above, except in rare cases where an OUA manual (File Maintenance) adjustment has been made.

Cum Obligations (FACS)

Analogous to the above.

Cum Obligations (OUA) Estimated Cost

Estimated contract "run out" cost extracted from FACS. Not in current use.

Modification CFY Obligations

CFY obligations for each original contract or

amendment thereto. Obtained from Form 1356 and stored in PCF. Not accessed or used in system in input form; needed for internal cost sharing calculations only.

#### 4. Identification Flags

##### Exclude Flag

A one-digit code which can be used to classify a grant/contract for exclusion from generated reports. The codes are:

- 1 = Grants/Contract (does not exclude data)
- 2 = Purchase Orders (Contracts prefixed by WO, PL, CC, A, W, E, H, S, L, C, T, or P.)
- 3 = Disputed Schools
- 4 = Disputed Projects
- 5 = Others

This code can be entered by OUA using an input transcript. The "2" for purchase orders is automatically generated by the system when one of the above prefixes is part of the contract number.

##### FFRDC Flag

Contracts with Federally Funded Research and Development Centers are coded to allow for retrieval of data on those contracts. OUA file maintenance input only.

##### Mailing List Flag

A subscriber (non-university) added to the

University Reference File for mailing list purposes only is coded by entering an "X" in the appropriate column of an input transcript. This Flag prevents the subscriber data from appearing on output reports.

#### Medical School Flag

If a school is a medical school, a flag is set during entry of Form 1356 data to indicate this status. This flag allows for data retrieval of information on medical schools contracts.

#### Type of Effort Flag

If a contract is obtained from FACS which meets the selection criteria but is not of interest to OUA, i.e., a training contract, a type-of-effort flag for training can be input using transcript 5. This will prevent the contract data from being accessed and used in generated reports. (Such training records can be deleted from the system during the next monthly cycle.)

#### 5. Dates

There are several date fields used in OUA-MIS. The format is normally MM YY DD for these dates which include:

Contract Start Date

Contract End Date



Date of Future Funding (currently not in full use)

Date Continuation Funded

Modification Date

Start Date

Obligation Date

Proposal Received Date (rec'd by NASA)

Form 1356 Rec'd Date (rec'd by OUA)

Pass Thru Date (reserved for future use)

### III. SYSTEM OPERATIONS

#### System Processing Run Programs

The functions of OUA-MIS are accomplished by several computer applications referred to as "runs". Runs are pre-programmed routines which cause specific actions to take place, including update of the data files, edit of data input for validity, or the generation of formatted reports. Each run program has an assigned number which the user designates when requesting a particular processing task.

Run 1 through 6 are used to build, edit and maintain the data base files. Run 7 involves the generation of all the OUA-MIS reports using the data in the files. The completion of Runs 1-6 ensure that the data base files are complete and accurate, thus eliminating any further editing or corrections during Run 7 report production.

The user completes the Customer Service Request Form (Shown as Figure 5.) for Runs 1-6 and the OUA-MIS Report Control Form (Figure 6.) for Run 7. The forms show each run and all the options associated with each run. These options allow the user to further specify the processing task or data selection criteria for the run. Upon receipt of the request forms, the computer production/control staff will submit the appropriate

**EXTERNAL SOURCE DATA INPUT SUBMITTAL**

**SECTION I TO BE COMPLETED BY THE SUBMITTING OFFICE (See instructions on reverse)**

1. SUB-SYSTEM TITLE <p align="center"><b>OFFICE OF UNIVERSITY AFFAIRS MANAGEMENT INFORMATION SYSTEM</b></p>	2. AS/OF DATE	3. FILE I.D. <p align="center"><b>UZ01</b></p>											
4. TYPE OF INPUT (Card, tape, form, etc.) <p align="center"><b>Transcripts                      Cards</b></p>	5. CONCERNING THE DATA NOW BEING SUBMITTED AS INPUT ON THIS FILE I.D. FOR THIS AS/OF DATE: <b>N/A</b> (Check one column on each item) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:10%; text-align: center;">YES</td> <td style="width:10%; text-align: center;">NO</td> <td style="width:30%;"></td> </tr> <tr> <td>A. WERE PARTIAL SUBMISSIONS MADE PRIOR TO THIS ONE?</td> <td align="center">--</td> <td align="center">--</td> <td rowspan="2">* C. IF NO IS CHECKED ON ITEM B., INDICATE BELOW WHEN REMAINDER OF SUBMISSION CAN BE EXPECTED.</td> </tr> <tr> <td>B. DOES THIS SUBMISSION COMPLETE THE TOTAL INPUT?</td> <td align="center">--</td> <td align="center">--</td> </tr> </table>			YES	NO		A. WERE PARTIAL SUBMISSIONS MADE PRIOR TO THIS ONE?	--	--	* C. IF NO IS CHECKED ON ITEM B., INDICATE BELOW WHEN REMAINDER OF SUBMISSION CAN BE EXPECTED.	B. DOES THIS SUBMISSION COMPLETE THE TOTAL INPUT?	--	--
	YES	NO											
A. WERE PARTIAL SUBMISSIONS MADE PRIOR TO THIS ONE?	--	--	* C. IF NO IS CHECKED ON ITEM B., INDICATE BELOW WHEN REMAINDER OF SUBMISSION CAN BE EXPECTED.										
B. DOES THIS SUBMISSION COMPLETE THE TOTAL INPUT?	--	--											
6. NO. OF ITEMS OF INPUT	7. DISPOSITION OF INPUT ITEMS <p align="center"><b>Return to Submitter</b></p>												

8. REMARKS  
 OUA-MIS RUN SELECTION FORM: Request No.: \_\_\_\_\_ of \_\_\_\_\_

Run-1 General File Update

- a.  Update CSF from FACS
- b.  OUA Internal Updates
  - 1.  CSF-DSF (T. 1, T. 21)
  - 2.  Tables (T. 9-15)
  - 3.  OUA Code Change (T. 16)

Run-2 Update From FACS

- a.  Monthly Data Selection

Run-4 Negative Adjustment

- a.  Automatic

Run-3 File Maintenance

- a.  UNICODE UNILIST (T. 3-4)
- b.  Form 1356 Input (T. 2)
- c.  Edit Corrections (T. 5-8)  
(Check Transcripts or Cards Attached)
  - 1.  (T. 8) (BUZ32101) PCF
  - 2.  (T. 7) (BUZ32201) TDF
  - 3.  (T. 6) (BUZ32301) ASF

Run-5 Monthly End Game

- a.  Create Report Files
- b.  Validate Report Files
- c.  CSF List \*
- d.  ASF List \*
- e.  PCF List \*

Output Option

- a.  Print Full Size
- b.  Fiche

Run-6 Annual Start

- a.  Purge PCF as of:

M	M	D	D	Y	Y		

\* Check Only to Print Reports Independent of Validation. Do Not Check a. or b.

9. SIGNATURE OF SUBMITTING OFFICIAL	10. OFFICE CODE <b>P</b>	11. TIME AND DATE SUBMITTED
-------------------------------------	-----------------------------	-----------------------------

**SECTION II TO BE COMPLETED BY DATA PREPARATION SECTION**

12. ROUTING	13. LINE ITEM COUNT	14. LOG. NO.	15. PRODUCT CODE	16. PRIORITY	17. DUE DATE
18. RECIPIENT	19. ACTUAL COUNT	20. RELEASED TO		21. TIME AND DATE RELEASED	
22. REMARKS					

Figure 5. Customer Service Request Form



run cards (key-punched IBM cards) to achieve the data processing.

For some of the run options, the user must complete data coding sheets, called transcripts, which must accompany the Customer Request Form or Report Control Form. When information is being added, deleted or changed, the transcripts are used to identify the data items or elements involved in the creation or update of a data record. IBM keypunch cards are made from the user-entered data on the transcript and submitted as part of the processing run. Instructions for completion of each type of transcript are given in the sections to follow.

Transcripts are not required to specify the parameters for generated reports, with one exception: The AMES Special Report. This report option provides formatted reports consisting of financial data for selected projects to satisfy varied information requirements concerning NASA obligations and disbursements to universities. OUA is provided with the flexibility to tailor generated reports by specifying varied formats and data selection criteria. A transcript, completed by OUA, is used to submit the report processing requirements. This capability is fully documented in NASA TM X-3346, "Special Report Writer: A

Flexible Information Management System."

The runs and their associated options are described in detail in this section. Three major areas are highlighted for each run and the options: purpose of the application; method of requesting the run; and the reports generated as result of the run.

### Creation and Update of Master Data Files

#### A. Run 1 - General File Update

The General File Update maintains data files which are required for system control: The Contract Select File (CSF) which drives the system; the Delete Select File (DSF); the tables in the Ancillary Reference File (ARF); and the OUA codes for universities. Because of these functions, use of the run and its associated options should be performed on a monthly basis, prior to the OUA-MIS/FACS update, generation of reports, and any other major activities. This would normally occur during the beginning of the month.

The General File Update run can be used to accomplish four basic tasks:

- Contract numbers on new contracts can be added to the system by inputting the numbers to the Contract Select File (CSF). These can be added either directly by OUA or by extracting data from the FACS New Contract File (FNCF).
- Contracts can be deleted from the system by

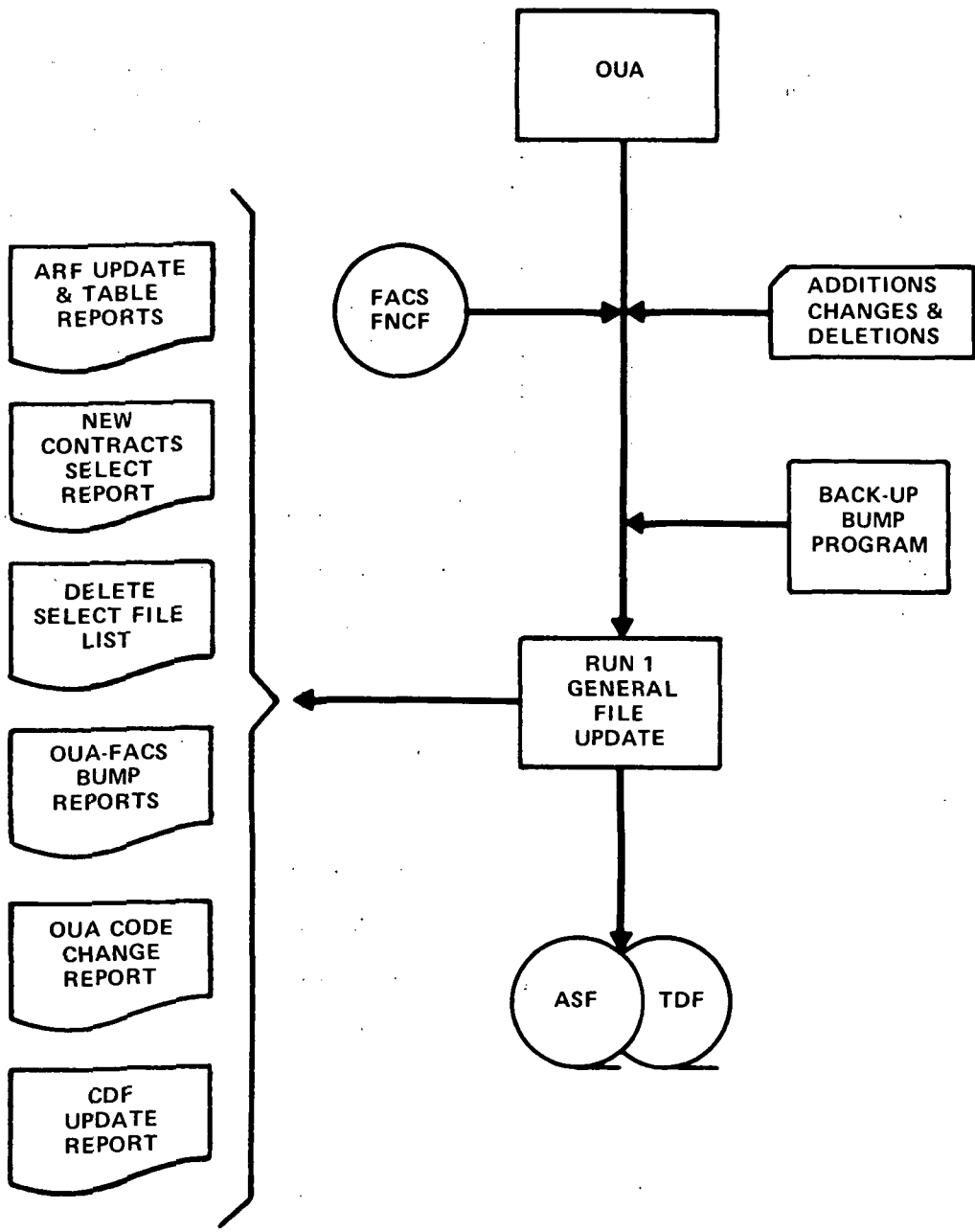


Figure 7. RUN 1, GENERAL FILE UPDATE  
(File, Update and System Maintenance Data Flow)

removing the contract numbers from the CSF.

- System control is provided by performing a monthly check to determine the adequacy of data extraction from FACS on contracts of interest to OUA.
- Data can be added, changed or deleted in the table files contained in the Ancillary Reference File. These tables contain system control data used to edit input, provide English for reports, and select the data sort sequence for the various formatted reports produced by the system.

In addition to the above tasks, one of the options available in Run 1 allows the user to make any required changes to the OUA codes which uniquely identify each school. Although this function cannot strictly be defined as a data file maintenance function, it is included in Run 1 for system efficiency in data processing.

NASA Form 35, Customer Service Request Form, is completed to request one of the available functions of Run #1. On the form, Run #1 options are shown as:

RUN - 1 General File Update

- a. \_\_\_\_\_ Update CSF from FACS
- b. OUA Internal Updates
  - 1. \_\_\_\_\_ CSF-DSF (T. 1, T. 21)
  - 2. \_\_\_\_\_ Tables (T. 9-15)
  - 3. \_\_\_\_\_ OUA Code Change (T. 16)



For the internal updates, options b. 1., b. 2., and b. 3., coding sheets (transcripts) are also required. Data which is to be added, changed or deleted is entered on the transcript and submitted for processing. Completion of the transcripts is described as each Run 1 option is outlined.

1. Option a. - Update Contract Status File (CSF) From FACS

^ a. Purpose

This option is used to maintain the Contract Select File (CSF) which contains basic identification for every contract of significance to OUA. The CSF defines the contracts for which financial and procurement data are extracted from the FACS data base for inclusion in the OUA-MIS data base. The CSF should be updated prior to the run against FACS to ensure that new contract numbers are included.

Contract information for the CSF is entered into the data base from two sources:

- OUA originated
- FACS New Contract File (FNCF)

OUA can input information on new contracts directly to the CSF. This data is obtained from the Form 1356 submittals from installa-

tions. Entering data independent of a FACS interface requires the use of Run #1, option b.1. which is discussed below.

Obtaining new contract information from FACS is achieved by running the CSF, using option a., against the FACS new contract file (FNCF) which contains data on contracts added to FACS in the preceding month. For each new contract, the FNCF contains the following information: Contract number, alpha code for the organization, business type code, Procurement Placement Code (PPC) and other selected data elements. The FNCF is generated before the FACS monthly edit cycle. In practice, much of the new contract information can be input to the CSF by OUA prior to the run against the new contract file. However, use of this option ensures that information on all new contracts is captured when an installation has not as yet submitted Form 1356 data to OUA.

When the CSF is run against the FNCF, certain criteria are imposed to specify which new contracts are added to the file. If a contract meets one of the criterion, data will

be automatically added to the CSF. As only one of the criteria needs to be met, the likelihood of missing contracts is decreased.

During the run, three data elements are examined to check the validity for selection as follows:

- The alpha code assigned to the institution holding the new contract must be a code for a university which is of interest to OUA. The code is compared to all the alpha codes in the OUA-MIS University Reference File (URF) and if a match occurs, the first criterion is met.
- Next, the business type code is checked. If the code in the FNCF is "U" for university, the second criterion is satisfied.
- Finally, the Procurement Placement Code (PPC) is examined. (The PPC is a two-digit code assigned by the installation procurement office to categorize the type of organization from which procurement is being made). If the PPC on the new contract matches one of the codes assigned to universities, the contract satisfies the last selection criterion and is automatically added to the CSF. The PPC codes recognized by OUA are hard-coded in the system. These are:

PPC Code

Meaning

Negotiated, Non-Competitive

SC	University purchases not in excess of \$10,000
SE	Services of educational institutions
SF	University purchases outside of United States
SW	Inter-governmental cooperative agreements and miscellaneous
ST	University grants

Negotiated, Competitive

RC University purchases not in excess of \$10,000  
RE Services of Educational Institutions  
RF University purchases outside the United States

b. Output Reports Generated

The Contract Select File Update Report is generated when Run #1, Option a. is completed. This report identifies each new contract that was on the FACS new contract file which according to selection criteria was of interest to OUA. Figure 8. is an example of the formatted report. The action taken for each contract is indicated in the last column of the report. The action message, "Already on CSF", confirms that the new contract data has been added by OUA prior to the run against FNCF. "Added to CSF" indicates that the contract met the selection criteria and has been added to the data base.

For contracts which are added to the CSF, the following data is provided from FACS for informational and analytical reasons only:

- Contractor number: Assigned by the installation procurement office to identify a specific contract.

CONTRACT SELECT FILE UPDATE REPORT

BUZ10203

G/C NUMBER CIC CDE ALPHA PPC DIVISION ENGLISH CD BT OUA CODE YMMDD AC ID ACTION

C	80166C	1283506	U129000	SE	UNIV CALIF LOS ANGEL	23	U	00614300	760805	A	BC****	ADDED TO CSF	
L	4610A	1020486	H070000	SW			01	U	05101000	760805	A	BC****	ADDED TO CSF
NAS	1	14507	H070000						05101000	760716	A	BB****	ALREADY ON CSF
NAS	2	9126	U178000						02605600	760716	A	BB****	ALREADY ON CSF
NAS	2	9127	H149000						02503700	760716	A	BB****	ALREADY ON CSF
NAS	2	9128	U129000						00614300	760716	A	BB****	ALREADY ON CSF
NAS	2	9130	U178000						02605600	760716	A	BB****	ALREADY ON CSF
NAS	2	9131	U129000						00614300	760716	A	BB****	ALREADY ON CSF
NAS	2	9132	M234000						02504600	760716	A	BB****	ALREADY ON CSF
NAS	3	20051	U178000						02605600	760716	A	BB****	ALREADY ON CSF
NAS	3	20110	1648500	G191001	RE GEORGIA INSTITUTE TE	05	U	01301800	760805	A	BC****	ADDED TO CSF	
NAS	3	20365	U147000						03905700	760723	A	BB****	ALREADY ON CSF
NAS	5	23387	P519000						03402500	760716	A	BB****	ALREADY ON CSF
NAS	5	23462	U252000						05505010	760716	A	BB****	ALREADY ON CSF
NAS	5	23500	U252000						05505010	760716	A	BB****	ALREADY ON CSF
NAS	5	23522	S728000						00613800	760716	A	BS****	ALREADY ON CSF
NAS	5	23557	C689000						02701300	760716	A	BB****	ALREADY ON CSF
NAS	5	23571	M752000						01304000	760716	A	BB****	ALREADY ON CSF
NAS	5	23576	P519000						03402500	760716	A	BB****	ALREADY ON CSF
NAS	5	23577	U141000						00601800	760716	A	BB****	ALREADY ON CSF
NAS	5	23603	G191000						01301800	760716	A	BB****	ALREADY ON CSF
NAS	5	23615	C080000						00601500	760716	A	BB****	ALREADY ON CSF
NAS	5	23618	S728000						00613800	760716	A	BB****	ALREADY ON CSF
NAS	5	23623	C568000						03602810	760716	A	BB****	ALREADY ON CSF
NAS	5	23624	M234000						02504600	760716	A	BB****	ALREADY ON CSF
NAS	6	2726	2125508	P202000	SE PENNSYLVANIA STATE	U 23	U	04207200	760416	C	BC****	ALREADY ON CSF	

1001

Figure 8.

- Contractor identification code: A seven-digit number which uniquely identifies the contractor's name, division, address and place of performance.
- Alpha code: A seven-character code which identifies the contractor and division and is used to alphabetize the FACS CIC file.
- Procurement placement code: A two-character code used to specify the type of organization (1st letter) and the procurement authority (2nd letter).
- Name: English name of university.
- Congressional district code: Two-digit numeric code for the congressional district of university.
- Business type code: One-character alpha code which should always be "U" for university on this report.
- OUA Code: 8-digit numeric code (extracted from the URF) which identifies each university of interest to OUA.
- Date of Entry: Date (system-generated) when new contract data was input or updated.
- Action ID: Codes which specify the source of the contract data and contract status.

Code

A BB	New contract entered by OUA
A BC	New contract entered by FACS
C BB	Contract (entered by OUA) which has been processed
C BC	Contract (entered by FACS) which has been processed.

The ten data elements above should appear for contracts added to CSF from FNCF. The report provides OUA with an overview of the run which gives clues for analysis and evaluation of the FACS data. The report does not produce all the information for contracts which were previously entered by OUA.

2. Bump Program - Backup for Option a.

a. Purpose

In order to ensure that all new contract data is obtained from FACS, a backup program which runs against the entire FACS data base, allows overlooked contracts and unusual conditions to be reported. This is essential as the new FACS contract data entered during the FACS

monthly update may have been incomplete or inaccurately input which would cause a miss on one or more of the desired matches. The Bump Program is an integral part of Run 1, option a., and will always be applied when this option is processed.

In addition, the bump program reports contracts for which there are identifying data included in FACS and the CSF, but there are no financial data as yet available from FACS. This provides OUA an opportunity to pinpoint errors and missing data in FACS which would affect the accuracy and completeness of OUA-MIS data.

The Bump Program would also be of benefit if, for some reason, a monthly update from FACS was missed. Any new contracts which were missed would appear on an output report informing OUA that the contracts are in FACS but are not on the Contract Select File (CSF). These contracts can then be added by OUA to the CSF prior to the monthly update from FACS.

b. Output Reports Generated

There are five reports generated by the bump program which list FACS conditions of possible



interest to OUA. Examples of three of these reports are shown as Figures 9-11. The other two reports are described below, although they are rarely generated by the system.

- "NO CIC Code for this Contract" (Figure 9.)

The first of these reports lists contracts which are contained in the FACS new contract file, but a contractor identification code (CIC) is not available in the FACS CIC file. This indicates that the contractor was not adequately identified when FACS data was input and a CIC code was not assigned.

Consequently, the procurement placement code, the business type code and the alpha code may be missing or entered incorrectly which would have prevented a match and selection of the contract for addition to the CSF. The report shows the contract number, PPC code assigned and any financial data available in the FACS procurement status file (PSF). Each of the contracts listed may require a manual check with Headquarters procurement office to examine the information available on the contract and to determine if inclusion in the OUA-MIS data base is desirable, i.e., are they university contracts?

RUN DATE 01/24/77

ODJ MANAGEMENT INFORMATION SYSTEM

TABLE 1

NO CIC CODE FOR THIS CONTRACT

PAGE 2

REPORT REFLECTS VALUES FROM PSF

G/C-NUM	PPC-CODE	CM-OBS	CY-OBS	CUM-OBS
NAS 9 15200	DJ	5757176	5757176	5757176
NASW 2790	FX	444	4221	4221
NASW 2791	FX	2567	5071	5071
NASW 2792	JA	515	717	717
NASW 2946	FX	589	1440	1440
NASW 30005	DD	0	452000	452000
NAS13 52	JA	249990	249990	249990
NAS13 53	DJ	9506	9506	9506
NCR 9 15123	WT	58000	58000	58000

REPORT TOTAL... 34

Figure 9.

- "Contract Meets OUA Standards; however, not on CSF or DSF" (Figure 10.)

The second report generated lists contracts which meet at least one of the criteria and are not currently included in either the contract select file (CSF) or the delete select file(DSF). The highlighted contracts are unaccounted for by any selection criteria. (The DSF, discussed in section 3. below, contains numbers of contracts which OUA does not wish to include in the data base. The DSF prevents the contract numbers from FACS being added to the CSF.) The report provides the contract number, the business type code, the PPC code, the alpha code and any data available on the FACS CIC file and the PSF. OUA can evaluate these contracts by interfacing with the procurement office to decide if inclusion in the data base is desirable.

- "OUA Contract Not on PSF" (Figure 11.)

The third report shows all contracts which are contained in the Contract Select File (CSF) but there is no information available in the FACS Procurement Status File (PSF). The report provides identification data as well as the date the contract data was entered and the source of

RUN DATE 01/24/77

OUA MANAGEMENT INFORMATION SYSTEM

TABLE 2

CONTRACT MEETS OUA STANDARDS. HOWEVER, CONTRACT NOT ON CSF OR DSF

PAGE 1

REPORT REFLECTS VALUES FROM PSF AND CIC

G/C-NUJN	BUS TYP	PPC CDE	ALPHA CODE	CIC CODE	CM-OBS	CY-OBS	CUM-OBS
NAS 1 14621	L	SE	D399000		33000	33000	33000
NCA 2507702	U	SW	U183000		10000-	0	0
NGR 5 2034	U	ST	C080000		225000	225000	225000
NGR33 23018	U	ST	Y009000		0	3511-	0
NSG 5148	U	ST	U141000		200000	200000	200000

REPORT TOTAL... 5

Figure 10.

OUA CONTRACT NOT ON PSF

REPORT REFLECTS VALUES FROM CSF

G/C-NUM	BUS TYP	PPC CDE	ALPHA CODE	OUA CODE	ENTRY DATE	CSF SOURCE
NSG 1376			V156000	05103700	01/11/77	OUA
NSG 1378			B884100	03600380	01/11/77	OUA
NSG 2197			U209000	04211100	01/11/77	OUA
NSG 2198			U216000	03616400	01/11/77	OUA
NSG 2199			C094000	00601750	01/11/77	OUA
NSG 3136			B532000	04200700	01/11/77	OUA
NSG 7287			U141000	00801800	01/11/77	OUA
NSG 7291			U141000	00801800	01/11/77	OUA
NSG 7293			M499000	02604100	01/05/77	OUA
NSG 8046			U164000	02004300	12/15/76	OUA

REPORT TOTAL... 35

Figure 11.

data. By examining the entry date and source of data, OUA can determine if the FACS file is missing data on a contract that should have been entered by now. For example, a contract entered only a month ago by OUA could be ignored as FACS will probably have the data input in the next monthly cycle. However, a contract showing an entry date of two or more months should be examined to determine why the data has not been received and/or input by the procurement office.

- "OUA Contract Does Not Meet OUA Standards. However, Contract is on CSF"

This report highlights contracts which may have been previously included on the CSF, but FACS changes have negated the previous system determination to accept the contract. These contracts must be examined to determine if they should be deleted from the CSF by OUA.

- "Contract Number Appears on CSF and DSF"

Contracts are listed on both files which results in a contradictory condition, i.e., instructions to both "select" and "not select" a particular contract. The system will default to "select" unless the improper entry is deleted through maintenance.

### 3. Option b.1. - CSF-DSF Internal Update

#### a. Purpose

This option is used by OUA users to directly add or delete contracts on the Contract Select File (CSF) and subsequently throughout the system. In practice, this option can be exercised at any time as the processing is independent of any FACS interface. Additions or deletions should be made prior to the run against the FACS New Contract File (FNCF), whenever possible.

OUA may receive information on new contracts which are not desired for inclusion in OUA-MIS prior to the run against the FACS new contract file. To prevent CSF Update, the contract number can be added to the DSF by manually submitting the contract number on a transcript. It should be noted that any transaction involving addition or deletion of data in the DSF must be submitted with a CSF transaction, even if the latter is only a dummy, i.e., repetition of a contract number already on the CSF. The program application was set up in this manner as it is the most economical way to process this option.

b. Preparation of Transcripts 1. and 21. for Input

Transcript 1. is used to input data to the CSF file. The same transcript can be used to either add or delete contract data. An example of Transcript 1., is shown as Figure 12. to illustrate the necessary entries for additions and deletions.

If the transaction involves an addition of a contract to the CSF, the contract number is entered in card columns 1 through 11. In addition, the OUA Code for the university is obtained from the Unicode list and entered in columns 12 through 19. The only other entry necessary is the action code "A" for add in column 78.

For deletions of contracts from the CSF, the only entries needed are the contract number (card columns 1-11) and the action code "D" for delete (Column 78.)

The addition of a contract to the Delete Status File (DSF) requires the use of Transcript 21 shown as Figure 13. Two entries are required, the contract number (columns 1 through 11) and the action code A (add) or D (delete) in column 78. The add function ensures that data for the contracts listed will not be accessed



from FACS. If it becomes desirable to remove a contract from this list the delete function can be employed. As noted before, a DSF transaction must be submitted with a CSF transaction.

A contract number in the DSF will automatically be deleted whenever FACS removes that particular contract from its data base. During Run #1 Bump Program processing, any contract which is no longer in the FACS data base and does not appear in the OUA-MIS CSF will automatically be removed from the DSF. This prevents the DSF from continuing to build in size and avoids the need for routine delete transactions submitted by OUA.

c. Output Reports Generated

Several reports will be generated following the processing of this option which will list the successful transactions and those which could not be processed. These reports enable OUA to examine all input transactions and take any corrective action required prior to the OUA-MIS/FACS Update, Run #2.

The following reports are generated:

- Input Data Card Listing

All the contracts submitted for this run are listed in numeric sequence, providing the contract number, OUA code, and sources of data code. An example of the card listing is included as Figure 14.

- Delete-Select-File (DSF) List

A complete listing of all the contract numbers on the Delete Select File following any additions or deletions during this option run is provided. (Figure 15.)

- Contract Select File Update Report

All the contracts that were input for addition to or deletion from the CSF are listed. The contract number, alpha code, OUA code, date of entry and the action and source codes are included. In addition, the last column contains a message for each contract to confirm that the transaction was either successfully completed or could not be processed due to the error specified in the message.

The message, "Added to CSF", confirms the addition of the contract to the CSF. "Deleted from CSF" informs OUA that the contract delete transaction was completed. Figure 16. is an

OVA MANAGEMENT INFORMATION SYSTEM

CONTROL PROCESSING REPORT

X

1	NAS 2	943103904400	AB
	NAS 5	2380104701000	BA
	NAS 5	2379901101100	ABB
	NAS 5	2377702004300	ABB
	NAS 5	23707	ABB
	NAS 5	2370200614300	DBB
	NAS 5	2380800801800	ABB
	NAS 5	2380004206000	ABB
	NAS 6	279402605600	ABB
	NAS 8	3223000400300	ABB
	NAS 8	3221500100300	ABB
	NCA	2250702	DBB
	NCA	266070100612541	ABB
	NCA	267570300613576	ABB
	NCA	268070100614450	ABB
	NCA	274570600613800	ABB
	NCA	274570300613800	ABB
	NSG	136704201000	ABB
	NSG	137103603100	ABB
	NSG	135805103700	ABB
	NSG	135503702000	ABB
	NSG	136301203000	ABB
	NSG	136205102700	ABB
	NSG	137302605600	ABB
	NSG	137905102700	ABB
	NSG	136102208000	ABB
	NSG	137502802500	ABB
	NSG	219201802790	ABB
	NSG	306L	DBB
	NSG	515102905250	ABB
	NSG	729302604100	ABB
	RUN-TYPE 1 PASSED TO OVA-MIS PROCESSING MODULES.		
	OVA-MIS PROCESSING OF CONTROL PROGRAM COMPLETE.		

Figure 14.

A	77751	NAS 1	13176	NAS 5	902	NAS 8	16624	NAS 9	7676	NAS10	6919	NCA 2390401
A	95818A	NAS 2	59	NAS 5	1454	NAS 8	17920	NAS 9	8452	NAS10	7183	NCA 2390403
C	9658	NAS 2	2220	NAS 5	2629	NAS 8	18538	NAS 9	8725	NAS10	7247	NCA 2420502
C	71261C	NAS 2	3871	NAS 5	3246	NAS 8	19101	NAS 9	8726	NAS10	8239	NCA 2510501
CC	57543	NAS 2	3909	NAS 5	3927	NAS 8	21257	NAS 9	8928	NAS10	8895	NCA 2553601
CC	57933	NAS 2	4132	NAS 5	5899	NAS 8	22456	NAS 9	8974	NAS12	503	NCA 2560501
CC	58502	NAS 2	4140	NAS 5	7089	NAS 8	22457	NAS 9	9003	NAS12	519	NCA 2560601
CC	80041	NAS 2	4385	NAS 5	8241	NAS 8	22459	NAS 9	9867	NAS12	523	NCA 2586501
E	47056	NAS 2	4530	NAS 5	8770	NAS 8	22460	NAS 9	9988	NAS12	662	NCA 2600601
L	4610A	NAS 2	4622	NAS 5	8784	NAS 8	22462	NAS 9	10289	NAS12	666	NCA 2600602
L	99151	NAS 2	5077	NAS 5	12511	NAS 8	22463	NAS 9	10304	NAS12	1245	NCA 2600603
NAS 1	4711	NAS 2	5610	NAS 5	13606	NAS 8	22465	NAS 9	10306	NAS12	1369	NCA 2660503
NAS 1	6101	NAS 2	5786	NAS 5	14500	NAS 8	22466	NAS 9	10380	NAS12	1432	NCA 2670502
NAS 1	6102	NAS 2	6560	NAS 5	14873	NAS 8	24865	NAS 9	10445	NAS12	1552	NCA 2675316
NAS 1	6103	NAS 2	6850	NAS 5	15870	NAS 8	29388	NAS 9	10535	NAS12	2199	NCA 2675319
NAS 1	6104	NAS 2	7208	NAS 5	17358	NAS 8	29389	NAS 9	10677	NAS12	2209	NCA 2675502
NAS 1	6691	NAS 2	7215	NAS 5	20504	NAS 8	29390	NAS 9	11036	NAS12	2255	NCA 2675504
NAS 1	7921	NAS 2	7439	NAS 5	21098	NAS 8	29788	NAS 9	11087	NAS12	2258	NCA 2675517
NAS 1	7984	NAS 2	7873	NAS 5	21215	NAS 8	30161	NAS 9	11553	NCA 2	10701	NCA 2675701
NAS 1	8134	NAS 3	6473	NAS 5	21217	NAS 8	30340	NAS 9	12269	NCA 2	35501	NCA 2680503
NAS 1	8214	NAS 3	6994	NAS 5	21533	NAS 8	30566	NAS 9	12539	NCA 2	40603	NCA 2685504
NAS 1	8302	NAS 3	8190	NAS 5	21542	NAS 8	30810	NAS 9	12557	NCA 2	50407	NCA 2685604
NAS 1	8303	NAS 3	8599	NAS 5	21764	NAS 8	31017	NAS 9	12967	NCA 2	50505	NCA 2685704
NAS 1	8304	NAS 3	9779	NAS 5	21783	NAS 8	31142	NAS 9	13207	NCA 2	50506	NCA 2745505
NAS 1	8305	NAS 3	9946	NAS 5	21791	NAS 8	31359	NAS 9	13358	NCA 2	50507	NCA 2780501
NAS 1	8311	NAS 3	10367	NAS 5	22234	NAS 8	31516	NAS 9	14367	NCA 2	50601	NCA 2780502
NAS 1	8561	NAS 3	11444	NAS 5	22412	NAS 8	31553	NASR	6	NCA 2	50602	NCA 2850601
NAS 1	8599	NAS 3	11588	NAS 5	23707	NAS 8	31573	NASR	6512	NCA 2	50604	NCA 2860701
NAS 1	8692	NAS 3	12502	NAS 6	840	NAS 9	1844	NASR	1009	NCA 2	75601	NCA 2895704
NAS 1	8872	NAS 3	12656	NAS 6	1029	NAS 9	2521	NASW	1121	NCA 2105601	NCA 2895705	
NAS 1	8941	NAS 3	12939	NAS 6	1127	NAS 9	2937	NASW	1276	NCA 2110503	NGL33 11001	
NAS 1	9041	NAS 3	12985	NAS 6	1231	NAS 9	3598	NASW	1516	NCA 2165501	NGR 5 24005	
NAS 1	9051	NAS 3	13642	NAS 6	1338	NAS 9	3997	NASW	1532	NCA 2165601	NGR 5 63005	
NAS 1	9071	NAS 3	13771	NAS 6	1391	NAS 9	4065	NASW	1749	NCA 2175501	NGR 5 67001	
NAS 1	9525	NAS 3	13823	NAS 6	1417	NAS 9	4557	NASW	1801	NCA 2175601	NGR18 35001	
NAS 1	9541	NAS 3	13901	NAS 6	1461	NAS 9	4708	NASW	1806	NCA 2200601	NGR23 5524	
NAS 1	9596	NAS 3	13934	NAS 6	1537	NAS 9	5093	NASW	1886	NCA 2240502	NGR33 11009	
NAS 1	9761	NAS 3	14133	NAS 6	1578	NAS 9	5123	NASW	1988	NCA 2250501	NGR33 11017	
NAS 1	9960	NAS 3	16557	NAS 6	1616	NAS 9	5306	NASW	1989	NCA 2250502	NGR33 11031	
NAS 1	10686	NAS 3	16883	NAS 6	1691	NAS 9	5383	NASW	2016	NCA 2250503	NGR33 11033	
NAS 1	10810	NAS 3	17239	NAS 6	1730	NAS 9	5637	NASW	2046	NCA 2250601	NGR33 11043	
NAS 1	11787	NAS 3	17617	NAS 6	1762	NAS 9	5965	NASW	2071	NCA 2250602	NGR47102001	
NAS 1	11788	NAS 3	18042	NAS 6	1805	NAS 9	6666	NASW	2157	NCA 2250702	NGR52120001	
NAS 1	11789	NAS 3	18043	NAS 6	1862	NAS 9	6752	NASW	2702	NCA 2290502	NSG 510	
NAS 1	11898	NAS 3	18046	NAS 6	2252	NAS 9	6762	NASW	2703	NCA 2290503	NSG 627	
NAS 1	11979	NAS 3	18053	NAS 6	2544	NAS 9	7239	NASW	2703	NCA 2295501	NSG 1029	
NAS 1	12011	NAS 3	18055	NAS 7	796	NAS 9	7489	NAS10	1147	NCA 2330501	NSG 306L	
NAS 1	12459	NAS 3	18841	NAS 8	2650	NAS 9	7492	NAS10	2154	NCA 2355401	NSG 7054	
NAS 1	12767	NAS 4	1273	NAS 8	2761	NAS 9	7517	NAS10	6132	NCA 2355402	NSR23 5527	
NAS 1	12885	NAS 4	1999	NAS 8	13659	NAS 9	7611	NAS10	6166	NCA 2385501	NSR33144002	

Figure 15.

CONTRACT SELECT FILE UPDATE REPORT

G/C NUMBER	CIC CODE	ALPHA	PPC	DIVISION	ENGLISH	CD	BT	OJA CODE	YMMDD	AC ID	ACTION
NSG	2193	U183000		02905210	761215	C	BB****	ALREADY ON CSF			
NSG	2194	P519000		03402500	761215	C	BB****	ALREADY ON CSF			
NSG	2196	M234000		02504600	770111	A	RB****	ALREADY ON CSF			
NSG	3131	C238000		03900800	761215	C	BB****	ALREADY ON CSF			
NSG	3132	U156000		01500400	761215	C	BB****	ALREADY ON CSF			
NSG	3133	U199000		01803800	761119	C	BB****	ALREADY ON CSF			
NSG	3134	W200000		05401800	761215	C	BB****	ALREADY ON CSF			
NSG	5130	N212000		03609300	761028	C	9B****	ALREADY ON CSF			
NSG	5139	U178000		02605600	761123	C	BB****	ALREADY ON CSF			
NSG	5140	0051000		03904300	761215	C	BB****	ALREADY ON CSF			
NSG	5141	0051000		03904300	761215	C	BB****	ALREADY ON CSF			
NSG	5142	U247000		05302000	761215	C	BB****	ALREADY ON CSF			
NSG	5143	H149000		02503700	761215	C	BB****	ALREADY ON CSF			
NSG	5145	D059000		03300200	761215	C	8B****	ALREADY ON CSF			
NSG	5146	C568000		03602800	761215	C	BB****	ALREADY ON CSF			
NSG	5147	U141000		00801800	761215	C	BB****	ALREADY ON CSF			
NSG	5149	U129000		00614300	761215	C	BB****	ALREADY ON CSF			
NSG	5151	U186000		02905250	770105	A	BB****	ALREADY ON CSF			
NSG	7264	U000000		90005500	761028	C	BB****	ALREADY ON CSF			
NSG	7275	1280007	ST CALIF INSTITUTE	TE 22	U	00601500	770118	A	BC****	ADDED TO CSF	
NSG	7280	S747000		03614600	761215	C	BB****	ALREADY ON CSF			
NSG	7288	U136000		01710100	761215	C	BB****	ALREADY ON CSF			
NSG	7289	2610509	UTAH STATE UNIV	01	U	04900600	770118	A	BC****	ADDED TO CSF	
NSG	7290	Y006000		00903000	761215	C	BB****	ALREADY ON CSF			
NSG	7292	D059000		03300200	761215	C	BB****	ALREADY ON CSF			

example of the CDF Update Report. (Error messages are described in the next section.)

- Contract Data File (CDF) Update Report

This report (Figure 17) will list any contracts that were deleted from the CSF. It will highlight any contracts deleted by accident.

### CSF-DSF Update Report Error Messages

The following messages may appear on the CSF-DSF Update Report as a result of an error in transactions.

<u>Messages</u>	<u>Meaning</u>
ACTION CODE *C* INVALID	An attempt was made to change a CSF or DSF entry which is not possible with this option. Only add and delete transactions are allowed. If a change is required, the contract must first be deleted and the change submitted as an add.
NO SUCH CSF TO DELE	An attempt was made to delete a non-existent record from the CSF. Contract may have been previously deleted or the contract number incorrectly entered on the transcript or keypunch card. Check number and resubmit if necessary.
INVALID ADD-(Already) ON CSF	Tried to add a record to the CSF which was already on the file. As above, check the number and resubmit, if necessary.
NO SUCH OUA CODE	The University Reference File has been checked for a match. This message may indicate an invalid or missing OUA code or an inaccurate alpha code.

OJA MANAGEMENT INFORMATION SYSTEM  
CONTRACT DATA FILE (CDF) UPDATE REPORT

OPTION 5: CONTRACT DELETES

GRANT/CONT	AI	OJA CODE	ALPHA C	CIC	T	X	F	CO	CFY OBLIGATIONS	CUM OBLIGATIONS
NAS 5 23707		00614300	G116075	12983		5		12	442500	442500
NCA 2250702		00601900	F223000	12831		4			238030	238030
NSG 306L		01803800	U199000	20655		5			0	0

SUMMARY OF CDF TRANSACTIONS: UPDATE TRANSACTIONS - 3, REJECTED TRANSACTIONS - 0.

Figure 17.

#### 4. Option b.2. Ancillary Reference File Table Updates

##### a. Purpose

This option is used to maintain data stored in the Ancillary Reference File (ARF) which contains eight sets of data referred to as tables. The table data is used to edit system input and provide both English text and data sort keys for generated reports. Input transcripts 9 through 15 are used to update the ARF tables when required.

Table 02, CASE Main Objective of Study, Codes and Description, is not represented by a transcript. It has been determined that the data in this table are constant and thus do not require an up-date transcript.

A few basic edits are performed on all table update input. On each transcript, certain areas are labeled "blank." These areas are checked and if nonblanks are found, the input card is rejected. Each table transcript has an update action code, a card update date, and a card identification code. The update action code is checked for A (add), D (delete), or C (change). If none of these are found, the card is rejected. The user may enter the card update date on the transcript as it may prove useful in reviewing



input listings. The transcript update date is not entered on the ARF record; the internal computer current date is placed on the ARF record as the update date. The card identification code must be a number from 01 through 08 (corresponds to the table number). If the code is entered as some other value, the card is not processed through the ARF update procedure. If the card identification value is for some other procedure within this run option, an attempt is made to process it through that logic. If the value is not within the acceptable set for this run, the card is rejected in the control module processing.

b. Preparation of Input Transcripts 9 through 15  
Transcript 9

This transcript is used to maintain Table 01, Accounting, Procuring and Technical Officer Installations. This table would only be subject to update if a new installation was established, an existing one was closed, or the name of an installation was changed. These conditions would be infrequent. Transcripts 9-12 are illustrated as Figure 18 and Transcripts 13-15 as Figure 19.

**OUA - MIA TRANSCRIPTS 9-12**

TRANSCRIPT 9		TABLE 01 - ACCOUNTING, PROCURING AND TECHNICAL OFFICER INSTALLATION DATA		DATE		PAGE 1 OF 1		PAGES		
ITEM NO.	CLASS CODE	ACRONYM	INSTALLATION NAME	PROGRAM OFFICE ACRONYM	SORT KEY	ACT. CODE	DD	YY	CARD NO.	
1	24	DFERC	DRYDEN FLT RES CIR	OO10DAST		051077A	01		01	
2	1	WIND	NASA DOWNEY			051077A	01		01	
3	5	SIG				051077D	01		01	
TRANSCRIPT 10										
TABLE 03 - C.A.S.E. FIELD OF SCIENCE AND ENGINEERING DATA										
ITEM NO.	CLASS CODE	C.A.S.E. FIELDS AND SUBFIELDS								ENTRY OR CHANGE DATE
1	2	MATH/EMATICS/COMP SCI - COMPUTER SCIENCES								051077A03
TRANSCRIPT 11										
TABLE 04 - C.A.S.E. FIELD OF SCIENCE AND ENGINEERING MAJOR GROUPING DATA										
ITEM NO.	CLASS CODE	MAJOR C.A.S.E. FIELD (Full Name)	MAJOR C.A.S.E. FIELD (Abbreviation)	C.A.S.E. FIELDS AND SUBFIELDS						ENTRY OR CHANGE DATE
1	2	MATH/EMATICS/COMP SCI	MATH/COMP	MATH/EMATICS/COMP SCI - COMPUTER SCIENCES						051077A03
TRANSCRIPT 12										
TABLE 05 - C.A.S.E. UTILITY ENGLISH										
ITEM NO.	CLASS CODE	C.A.S.E. SUBFIELD NAME	ABBREVIATED C.A.S.E. FIELD - SUBFIELD NAME	C.A.S.E. FIELDS AND SUBFIELDS						ENTRY OR CHANGE DATE
1	2	COMPUTER SCIENCES	COMP SCI	COMPUTER SCIENCES						051077A05

**OUA NOTE**

Use flags for Table 01:  
 P - Proc. Inst. Only      = - Equal to Other  
 N - Not Legal              T - T.O. Location Only

Figure 18.



The data in Table 01 are used to edit input of installation codes, provide installation English for reports, and relate program office acronyms to installations. A sort key is also defined in Table 01. It is used to associate a special numeric value with the installation to ensure sorting as desired by the user. (See discussion on maintenance of sort keys, page 95 .) The transcript data elements are described below:

<u>Label</u>	<u>Comments</u>
● Installation Code	A two-digit numeric code is placed in columns 2-3. Each accounting installation has a unique code stored in Table 01.
● Use Flag	A code can be assigned to an accounting installation to specify the installation's responsibility status as described below. Where more than one use flag is appropriate, precedence is "=", then "N". (T, P, and N are mutually exclusive.)

<u>Code</u>	<u>Definition</u>
=	The equal sign indicates that the funding responsibility for contracts is shifted to a different accounting installation for bookkeeping purposes. For example, 03=10 means that installa-

tion 03 funding is the responsibility of installation 10 which is NASA Headquarters.

T The "T" is the code for Technical Officer Location Only. An installation coded with a "T" cannot obligate money but can perform contract monitoring.

P This code indicates that the installation can only physically accomplish a procurement; it cannot perform the technical monitoring function.

N "N" is used for installations which are no longer in existence. The installation data are retained for historical purposes.

<u>Label</u>	<u>Comments</u>
● Acronym	The installation alphabetic acronym is entered in columns 5-9, left-justified.
● Installation Name	The full installation name is left-justified in columns 10-29.
● Sort Key	A unique 4-digit numeric code for the installation is entered in columns 30-33. This code is used to sequence installation data for generated reports.

<u>Label</u>	<u>Comments</u>
● Program Office Acronym	The acronym for each program office is entered in columns 34-38. Acronyms are used for report English when space will not allow for the full name.
● Entry or Change Date	The current date is entered in columns 72-77 using the format MMDDYY.
● Action Code	The action code entered in column 78 must be either A for add, C for change, or D for delete.
● Card ID	The card identification, already printed in columns 79-80, is always 01.

#### Data Sort Key

The sort key, appearing on ARF tables 01,08 and on the OUA-MIS sort key list have several important functions:

- They arrange NASA installations alphabetically, excluding Headquarters;
- for Headquarters, they provide two different sort sequences: alphabetical by Headquarters Mail Code or alphabetical by Mail Code within major program office groupings;
- they have the capability of alphabetizing the centers along with Headquarters division mail codes under major program offices (if NASA goes back to centers

reporting through specific program offices.)

- they provide a matrix-type file relationship, i.e., groups data elements pertaining to a contract by relating the sort key and
  - For Field Centers: the accounting (and procuring) installations two-digit numeric codes, the full center name English, the 5-position acronym, and the former program office to which each center reported (Table 01).
  - For Headquarters Divisions: the cognizant office fiscal accounting code number, the program office name and abbreviation, the Headquarters mail code and the division name (Table 08).

#### Changing Sort Keys

Sort keys must be changed when new offices are added, old ones are abolished or name changes require re-alphabetizing. Certain general rules and some special exceptions apply. The material to follow provides sufficient infor-

mation to maintain the sort key.

1. The 4-digit sort key consists of two parts. The first digit indicates program office:

<u>First Digit</u>	<u>Program Office</u>
0	(Currently none--used where all Centers report to single program office. Used only for centers.)
1	Office of Applications
2	Unassigned
3	Office of Advanced Scientific and Technology
4	Unassigned
5	Office of Space Flight
6	Unassigned
7	Office of Space Science
8	Office of Energy Programs
9	Misc. -- Non-program Offices

For sorting purposes this first position is used only if a report must breakout data by Program Office. In a sort of this nature, "0" is bypassed; hence, any resultant list contains data on Headquarters offices only.

These designations must be observed as they are hard coded in some of the processing stages. For example, in the run 7 Greenbook, "Program



Office Reports"; specification of "4B, OAST" will select all records for which the first sub key position is "3". If the leading zero on any Center sort key was, for some valid reason, changed to "3", then all records pertinent to that Center would be included in the "4B" report.

2. The last remaining three positions of the sort key are straight alphabetizers beginning with the Centers which are allowed codes in the X001 to X074 range, followed by the alphabetized Headquarters division in the X075-X999 range. (Those ranges must be observed as they are hard coded in some of the processing stages.)

3. The sort keys for the Centers (see above #1), and 9245 and 9255 are hard coded into the Greenbook report under selection criteria in Run 7, internal reports type 3 and 4. Changing these codes should be avoided, if at all possible, as a parallel modification must be made in the Greenbook report writer program.

4. The sort key is not a file identifier. Hence, tables 01 and 08 through which it is maintained are not in sort key sequence. Therefore, it would be very difficult to re-assign or review sort keys from these tables. The "sort key

list" following table 08 on the ARF printout is sorted on the last three positions of the sort key. Hence, once the desired location for an office is found on the list, assignment of the alphabetizing code is simple. The initial digit is assigned from the table in #1 above.

On both tables 01 and 08 sort keys are assigned only to offices which can (or could in the past) provide technical officers for grants and contracts. For Headquarters offices, there are usually, but not always, mail codes. In some instances on Table 08 the "mail code" is actually the acronym for the program office name. Considerations in maintaining Tables 01 and 08, including additional observations on the role of the sort key, follow.

#### Table 01

Note that only installations which can serve as accounting installations (i.e., they fund projects) and can have technical officers are assigned sort keys. Headquarters is an exception since its sort keys are at the division rather than the installation level. Hence, any report writer which accesses AI = 10 in search of a sort key is automatically switched to Table 08

where the search may proceed. Former installations, such as ERC, with a "N" use flag must be left on the table. These codes are required for projects closed out prior to the demise of the installation and are generally left as is, i.e., no change in technical monitor or Fiscal coding is made. Hence, the former codes must be retained for historical purposes.

#### Table 08

Appreciation of Table 08 is greatly enhanced through the realization that while the cognizant office is the file identifier, access through either the mail code or the sort key is just as common. For the generation of each report by the system, there is a pre-programmed run routine which defines how the data required for the report will be accessed and sorted. Figure 20. is provided to illustrate a few examples of the relationships between search codes, the data files, Table 08 and the generated reports. In the first example, it shows how the AMES OBS Tables II and XII are built. The contracts data from the AWCS Statistics file for each COF OFF are rolled up and summarized. The COG OFF code is used to

<u>Available Search Code</u>	<u>Search Code Obtained From</u>	<u>Table 08 Related Item Needed</u>	<u>Table 08 Look Up Item Needed For</u>	<u>Reports Affected</u>
COG OFF	AWCS	PROG ABREV	Program Office Identification	Ames OBS Tables II & XII
COG OFF	AWCS	Div. Name	Division Identification	Ames OBS Tables II & XII
COG OFF	AWCS	Mail Code	Mail Code Identification	Ames OBS Table II & XII
Sort Key	PCF	PROG ABREV	Program Office Identification	DANALYST Table IA
Sort Key	PCF	MAIL CODE	Mail Code Identification	DANALYST Table III
Hq. Mail Code	Card 83	Sort Key	CDF Contract Record	Greenbook/CASE
Hq. Mail Code	Card 58	Sort Key	PCF & CDF Records	Greenbook/CASE/DANALYST

Figure 20. Sort Key Function Table

obtain the Program Office English from Table 08 to be used as headers on the Tables.

Note that numeric COG office identifications are actually fiscal codes assigned by the financial management office. For offices which do not have any funds available, access by COG OFF code will never be required. However, since this is the file identification on Table 08, OUA assigns an alphabetic pseudo code of arbitrary construction. This causes no problems, until money is made available. At that time the pseudo code listing should be deleted and the proper information added along with the new COG OFF code.

In a similar manner, new offices which have money, but no mail code or which will never serve as a technical monitoring office do not necessarily need a mail code listed. Under these circumstances, access to Table 08 using the mail code as the search key does not occur. The same applies to sort keys. Hence, while COG 700 OAST may supply some funds it will never have a technical monitor assigned to it per se. Thus, Table 08 provides sufficient information for constructing the essentially

financial reports (Ames OBS, Ames Special). Reports depending heavily on the sort key alone (Greenbook, DANALYST) do not require the other information normally associated with COG700. Sort key functions and processing relationships are summarized in Figure 20.

#### Transcript Number 10

This transcript is used to maintain Table 03, CASE Field of Science and Engineering. Tables 03, as well as the other CASE Tables, (04 and 05 described below) would only require updating if CASE fields, groupings or English were added, deleted or changed in some way. This would not occur very often. Table 03 is one of three tables containing CASE data. There are 34 different CASE fields of science and engineering. The 34 fields are composed of eight major group fields and their subfields. Transcript number 10 is used to define the entries in terms of the CASE code and field names. The transcript data elements are described below:

<u>Label</u>	<u>Comments</u>
● CASE	CASE Code defining one of the 34 CASE Fields--Must be input as a two-digit numeric value in columns 2-3 or the card will be rejected.

<u>Label</u>	<u>Comments</u>
● CASE Fields and Subfields	Descriptive English for CASE Fields and Subfields is entered in columns 4-43, left-justified.
● Entry or Change Date	The current date is entered in columns 72-77 using the format, MMDDYY.
● Act. Code	The action code entered in column 78, must be either A for Add, C for Change, or D for Delete.
● Card ID	The Card Identification printed in columns 79-8 is always 03.

#### Transcript Number 11

This transcript is used to maintain Table 04, CASE Field of Science and Engineering Major Grouping. This is one of three tables containing CASE data. The 34 different CASE fields in Table 03 are composed of eight major group fields defined in Table 04. Transcript number 11 is used to define the eight major fields. The data are used for editing input and providing English for report purposes. The transcript data elements are described below:

<u>Label</u>	<u>Comment</u>
● Grouping Code	The CASE Major Group Code entered in column 3 must be Numeric or the Card will be rejected.

<u>Label</u>	<u>Comment</u>
● Major CASE Field (Full)	The CASE Major Group English (Full Name) left-justified in columns 4-26.
● Major CASE Field (Abbrev.)	CASE Major Group English (Abbreviated) left-justified in columns 27-37.
● Entry or Change Date	The current date is entered in columns 72-77 and the format is MMDDYY.
● Action Code	The action code entered in column 78 must be either A for Add, C for Change, or D for Delete.
● Card ID	The Card Identification--printed in columns 79-80 will always be 04.

#### Transcript Number 12

This transcript is used to maintain Table 05, CASE Utility English. This is the last table containing CASE data. Transcript number 12 is used to define the 34 CASE fields in terms of abbreviated major field and subfield names as a single input data element. It is also used to input the CASE subfield data in complete form. This is the descriptive CASE English used in the CASE and Greenbook reports. The transcript data elements are described below:



<u>Label</u>	<u>Comment</u>
● CASE Code	CASE code defining one of the 34 CASE fields--must be input as a two-digit numeric value (in columns 2-3) or the card will be rejected.
● CASE Subfield Name	The CASE subfield English corresponding to CASE code is left-justified in columns 4-23.
● Abbreviated CASE Field-Subfield	The abbreviated form of CASE major field and subfield as associated with the CASE code in columns 24-39 is left-justified.
● Entry or Change Date	The current date is entered in columns 72-77 using the format MMDDYY.
● Action Code	The action code entered in column 78 must be either A for Add, C for Change, or D for Delete.
● Card ID	The Card Identification printed in columns 79-80 is always 05.

### Transcript Number 13

This transcript is used to maintain Table 06, state code, acronym, name, and region code. The OUA code contains the state code in the leftmost three positions; the remaining positions define the institution within that state. The state code is extracted from the OUA code and used to enter this table to access state abbreviation, state

<u>Label</u>	<u>Comment</u>
● State Code	The State Identification Code defining locations in terms of States, U.S. Possessions, and oreign Countries is entered in columns 1-3. If blank or nonnumeric, the card will be rejected. These codes are obtained from FIPS5-1.
● State Abbreviation	The abbreviation of the location associated with a State Code is left-justified in columns 4-11.
● State Name	The complete spelling of location associated with State Code is entered in columns 12-31, left-justified.
● Region Code	The Department of Commerce Geographic Region Identification Code defining geographic region associated with location defined by State Code is entered in columns 32-33.
● Entry or Change Date	The current date is entered in columns 72-77 using the format MMDDYY.
● Action Code	The Action Code in column 78 must be either A for Add, C for Change, or D for Delete.
● Card ID	The Card Identification printed in columns 79-80 is always 06.

#### Transcript Number 14

This transcript is used to maintain Table 07, the Department of Commerce Standard Geographic Region Codes and Names. The table provides

English for the geographic regions to be used in reports. The transcript data elements are described below:

<u>Label</u>	<u>Comment</u>
● Region Code	The Geographic Region Identification Code is entered in columns 2-5. If blank or nonnumeric, the card will be rejected.
● Region Name	The Geographic Region Name is left-justified in columns 4-23.
● Entry or Change Date	The current date is entered in columns 72-77 and is formatted MMDDYY.
● Action Code	The Update Action Code entered in column 78 must be either A for Add, C for Change or D for Delete.
● Card ID	The Card Identification printed in columns 79-80 is always 07.

#### Transcript Number 15

This transcript is used to maintain Table 08, COG/Program Office, Mail Code and Sort Key. This is the most frequently updated table as any organizational change within NASA may require modifications to the table. The table provides English for report processing sort keys alphabetically arranging data in report by

installation and program offices. The sort key is retrieved by accessing the table by means of the COG office code or the mail code, depending upon how the sort key is being used. The transcript data elements are described below:

<u>Label</u>	<u>Comments</u>
● COG Office	The Cognizant Office Code must be entered in columns 1-3. A blank in any column will cause the card to be rejected.
● Program Office Abbreviation	Program Office Name Abbreviation is left-justified in columns 4-8.
● Program Office Name	Complete Program Office Name is left-justified in columns 9-28.
● Mail Code	Program Office Mail Code is entered in columns 29-33, left-justified.
● Division Name	The Program Office Division Name is left-justified in columns 34-53.
● Sort Key	Program Office Sort Key is entered in columns 54-57.
● Entry or Change Date	The current date is entered in columns 72-77 using the format MMDDYY.
● Action Code	The Update Action Code in column 78 must be either A for Add, C for Change or D for Delete.
● Card ID	The Card Identification printed in columns 79-80 is always 08.

c. Output Reports Generated

The ARF Table Report provides a formatted list of the ARF tables. The record images are identical to the input transcripts. The data elements are separated into columns, with two spaces between each column for printing.

Table 01 is illustrated as Figure 21. to provide an example of the format.

An edit report is produced which will indicate any errors as result of update transactions to the Ancillary Reference File. The following error messages could appear.

<u>Message</u>	<u>Meaning</u>
INVALID INPUT DATA	This message means that the action code was either incorrect or missing. Action code must be A (add), C (change) or D (delete). Correct and resubmit.
DATA IN FILLER	Areas on the transcript specified as "blank" had data entered. Correct and resubmit.

ARF TABLE REPORT - TAB 01

U	AI	ACCOUNTING	INSTALLATION	KEY	PO	UPDATE	A	TB*
AI F	ACRNM			ACRNM*	DATE	C	NO*	
23 4	5-9	10-29	30-3	34-B	* 72	THRU	80*	
03 = 10								*740202 C 01*
04 = 10								*730310 C 01*
10 HQ		NASA HEADQUARTERS						*110172 A 01*
11 = 10								*730913 C 01*
14 N ND		NASA DOWNEY						*110172 A 01*
15 = 21								*730501 C 01*
21 ARC		AMES RESEARCH CENTER	0005	OAST				*741004 C 01*
22 LERC		LEWIS RESEARCH CTR	0040	OAST				*741004 C 01*
23 LARC		LANGLEY RESEARCH CTR	0035	OAST				*741004 C 01*
24 DFRG		DRYDEN FLT RES CTR	0010	OAST				*760122 C 01*
25 N ERC		ELECTRONICS RES CTR	0007	OAST				*741004 C 01*
42 N NSO-C		SNS OFFICE-CLEVELAND	0060	OAST				*741004 C 01*
44 N NSO-N		SNS OFFICE-NEVADA	0065	OAST				*741004 C 01*
45 = 10								*730611 C 01*
51 GSFC		GODDARD SPAC FLT CTR	0020	OSS				*741004 C 01*
53 WFC		WALLOPS FLIGHT CTR	0070	OSS				*741004 C 01*
55 T JPL		JET PROPULSION LAB	0025	OSS				*741004 C 01*
56 = 10								*730913 C 01*
57 T WTR		WESTERN TEST RANGE	0072	OMSF				*741004 C 01*
62 MSFC		MARSHALL SPACFLT CTR	0050	OMSF				*741004 C 01*
64 NSTL		NATL SPACE TECH LABS	0055	OMSF				*750318 A 01*
72 JSC		JOHNSON SPACE CTR	0027	OMSF				*741004 C 01*
76 KSC		KENNEDY SPACE CENTER	0030	OMSF				*741004 C 01*
98 T GISS		GODDARD INST SPC SCI	0015	OSS				*741004 C 01*
" "		UNKNWN UNKNOWN INSTALLATION	" " " "	UNKNWN	999999			* 01*

11111

Figure 21.

Message

Meaning

BAD ADD BEYOND END

In this instance, an attempt was made to add an entry that exceeded the limit of the table size. (Table Sizes have been predetermined to meet programming requirements.) If other entries may be removed from the table, do so with a delete transaction and then re-submit this entry as an add. Otherwise, notify the maintenance programmer.

UNABLE TO DELETE

The entry to be deleted does not exist on the ARF Table.

UNABLE TO CHANGE

The entry to be updated does not exist on the ARF table.

ENTRY EXISTS ARF  
UNABLE TO ADD

There has been an attempt to add an entry that already exists on the ARF Table.

5. Option b.3. - OUA Code Change

a. Purpose

Option b.3. allows the OUA user to change an existing OUA code in the University Reference File (URF) and the Contract Data File (CDF). Each university has a unique OUA code assigned which is stored in the CDF. The OUA code is the key element which enables contractual data to be linked with each university during retrieval for report generation. If a code is changed, it must be changed in the URF and every contract record in the CDF for the particular university. Option b.3. is designed to automatically provide this function. Without this function it would be necessary to input changes to each contract record associated with a particular university.

b. Preparation of Input Transcript 16

Transcript 16, an example of which is shown as Figure 22, is submitted for OUA Code changes. The user is only required to enter the old (existing) OUA code in card columns 1 thru 8, and the new (changed) code in columns 9 thru 16.





c. Output Reports Generated

A single report results from this processing. This report, illustrated in Figure 23, provides a list of each code change made during the run and a message which either confirms the change or defines an error that has occurred. The section below defines the various messages which may appear.

OUA Code Change Report Error Messages

<u>Message</u>	<u>Meaning</u>
NEW OUA CODE ACCEPTED FOR CDF or NEW OUA CODE ACCEPTED	The old OUA code was found in URF and deleted and the new code was added to replace it in the URF and CDF.
OLD OUA CODE IS NOT NUMERIC AND INCORRECT	Card column positions 1-8 do not contain numerics as required. The code is ignored and no action is taken during the run. The correct code should be resubmitted.
NEW OUA CODE IS NOT NUMERIC AND INCORRECT	Card column positions 9-16 do not contain numerics as required. The code is ignored and no action is taken. The correct code should be resubmitted.
NEW OUA CODE ALREADY EXISTS, CARD REJECT	The OUA code is already in the URF; therefore, the card is rejected.

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PAGE 1

UUA-MIS. UUA CODE CHANGE REPORT

B UZ10301

CHANGE CARD IMAGE

ACTION/CAUSE

\*\*\*\*\*10\*\*\*15\*\*\*20\*\*\*25\*\*\*30\*\*\*35\*\*\*40\*\*\*45\*\*\*50\*\*\*55\*\*\*60\*\*\*65\*\*\*70\*\*\*75\*\*\*80

0120310001203000

NEW UUA CODE ALREADY EXISTS, CARD REJECT

0320100003201500

NEW UUA CODE CHANGE ACCEPTED

6700400067004100

NEW UUA CODE CHANGE ACCEPTED

Figure 23.

Message

Meaning

NEW OUA CODE PRE-  
VIOUSLY DELETED

An attempt was made to add a new code which was previously deleted during the same run. In this instance, an old (existing) OUA code was changed by one transaction on the transcript, but the user attempted to add the same code on the transcript. This cannot be done during the same run of option b.3. but could be accomplished during a subsequent run.

EITHER NEW OR OLD  
OUA CODE IS INVALID  
KEY

Two reasons could cause this message to appear: (1) the old code is not in the URF; or (2) system problem occurred when attempt was made to delete the old code.

B. Run 2 - Monthly Data Base Update From FACS

1. Purpose

The purpose of this run is the extraction of FACS data of interest to OUA, primarily financial and procurement data and technical description English. This is a normal monthly run performed after the FACS edit and update cycle is completed and when OUA has resolved any questions concerning inclusion of contracts in the Contract Status File (CSF) as highlighted by Run 1 output reports. Data available in FACS will be added to the OUA-MIS files for the new contracts included in the Contract Select File during Run 1. In addition, certain data which has been changed by FACS will be extracted to update existing contract records in OUA-MIS.

During the run, data are taken from three of the FACS data files:

- Procurement Financial File (PFF) - the financial data extracted include current and prior year obligation and disbursement amounts. The data are added or used to update the AWCS Statistics File (ASF). FACS figures which may be broken down by fund sources and program years are rolled together in order to reflect the actual current year obligations as required for OUA-MIS use.
- Procurement Status File (PSF) - This file provides data for the CDF including the

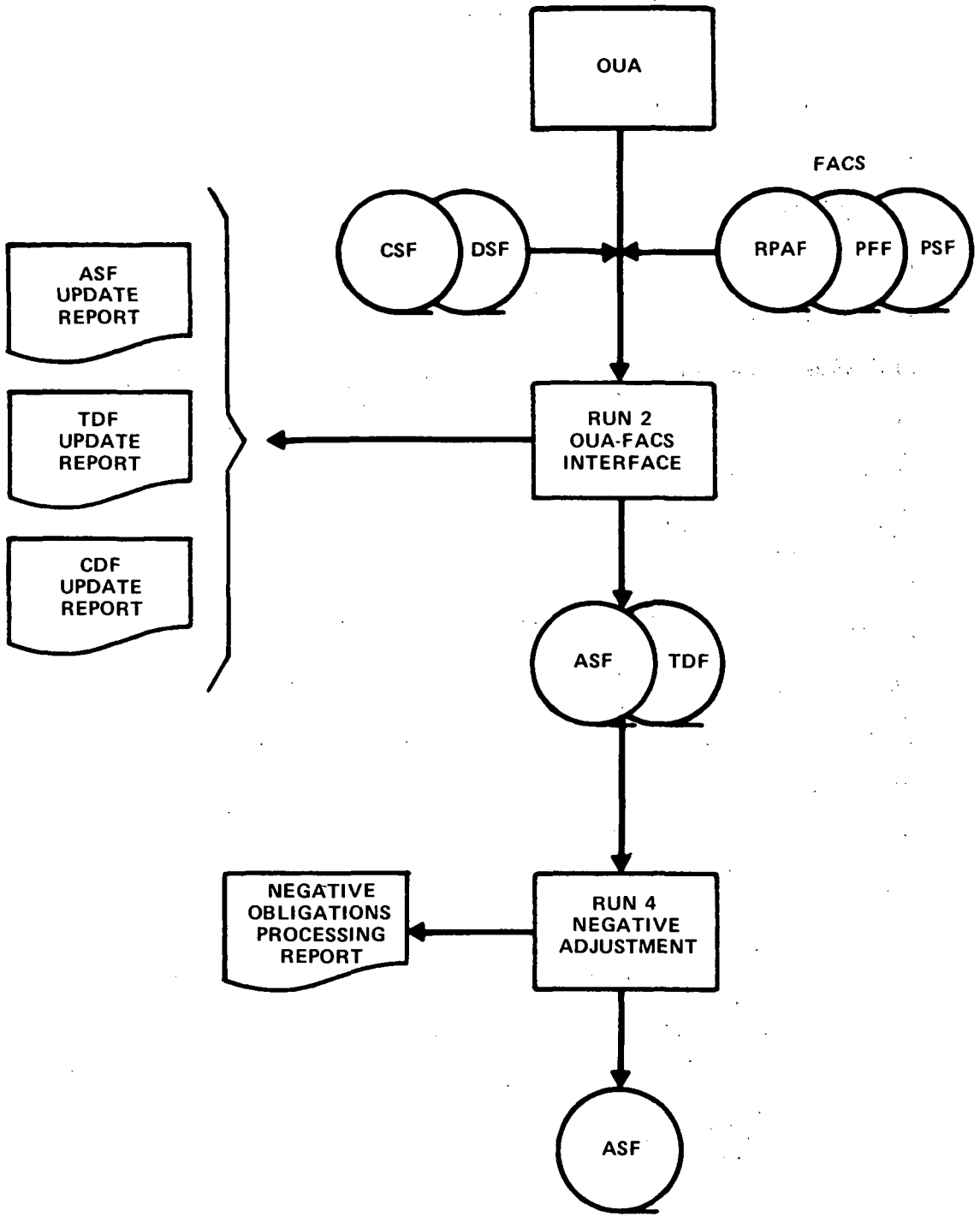


Figure 24. RUN 2. FACS-OUA INTERFACE  
 RUN 4. NEGATIVE ADJUSTMENT

contractor identification code (CIC), procurement placement code (PPC), FACS status code, extent of completion, type of effort, contract start and end dates, the procuring installation code and the estimated cost. Although all of the most recent data elements are stored in the CDF only the FACS status code and the contract start and end dates are regularly used; the other elements are stored for possible future use. The elements may appear in generated reports or be used for internal system checks.

- Reportable Procurement Action File (RPAF) - For each new contract on the Contract Select File, up to four 50-character lines of English can be extracted from the RPAF. These lines provide a brief technical description of the nature of the contract and they are stored in the OUA-MIS Technical Description File (TDF).

It should be noted that Run 2 and Run 4, which is discussed below in Section C., are processed at the same time, and prior to Run 3 processing. The runs are split to achieve more efficient system processing.

During Run 2 the OUA AWCS Statistics File (ASF) data is compared to the FACS Procurement Financial File (PFF) data for each contract. Any data changes implemented by FACS in the preceding month will be made to the ASF by a delete - add action, i.e., the existing contract record will be deleted and, at the same time, the record with changed data will be added. If an existing contract record has not been changed, the run program will pass to the next record for comparison.

In addition, all the data on new contracts included in the CSF during Run 1 will be added. The new contract data and existing records will be merged to create an entirely new ASF containing the most current financial data. The ASF for the previous month will no longer exist as part of the data base. This ensures that OUA-MIS data is always concurrent with FACS data.

Additions and updates to the Contract Data File (CDF) are automatically made in much the same way as for the ASF. Transactions are not as readily visible to the user since an output report listing is not produced for the CDF.

For the TDF, only additions of descriptive English for new contracts are accepted. Once a record has been added to the TDF, it will not be updated by FACS during a subsequent run; any required updating is performed by OUA using Transcript 7 to enter input during Run 3. The prevention of a subsequent update or overlay of data by FACS is accomplished by system-generated action codes assigned to each contract. A new contract with an action code, "A", will accept data from FACS. When the data fields are filled, this code is then internally changed to "C" and on a subsequent run,



the record will be ignored. This is necessary as OUA edits English extracted from FACS in order to obtain accuracy for report generation. Once the data has been edited, any subsequent changes made in FACS data will not be allowed to override OUA data. It should be noted that when new contract data is input by OUA ahead of FACS using Form 1356 submittals (Run 3b.) the new English should be added at that time in order to prevent a subsequent overlay during an update from FACS.

## 2. Preparation of Request Form

Requesting this run requires submittal of the Customer Service Request Form (NASA Form 35) with an "X" entered in the appropriate place as shown below.

Run-2 Update From FACS

a. X Monthly Data Selection

The end of the previous month is entered as the as-of date in the upper-right corner of the form. This date specifies the FACS data base to be used as input. The system is designed to use the most recent FACS data available and the date is required as an operations control to ensure correct

procedural performance in processing the run. Use of a FACS data base prior to the most recent update is generally not done. This would require programmer assistance.

### 3. Output Reports Generated

There are two reports of significance generated as a result of Run 2 processing: The ASF Update Report and the TDF Update Report.

The ASF Update Report provides a useful tool for analyzing any serious system problems which might occur during the run, but in normal practice does not require any manual analysis or action on the part of OUA. An example of this update report is shown as Figure 25. The message text in the last column indicates if the record has been added or deleted. An add or delete message can indicate the addition of a new record, deletion of an existing record, or the update to an existing record as can be seen in the bracketed entry in the example. The only change indicated involves the Agency-Wide Coding Structure (AWCS) code which classifies and identifies the particular NASA activity involved in the contract for the purpose of planning, programming, budgeting and accounting within NASA. The code was changed from 970-24-01 to 970-24-02. Thus, the contract record with the old code was

G/C	AI	COG	AWCS	FACS-CFY-OBS	OIA-CFY-OBS	FACS-CUM-OBS	CFY-DIS	CUMULATIVE-DIS	UPDATE	MESSAGE TEXT
NSG	1320		000	0	0	0	0	0		*DELETE
NSG	1321	23	702	20501	20501	20501	0	0	0	760812***ADD
NSG	1325		000	0	0	0	0	0	0	*DELETE
NSG	1329		000	0	0	0	0	0	0	*DELETE
NSG	2032	21	030	1003	1003	1003	0	0	0	760812***ADD
NSG	2032	21	030	-1003	-1003	0	0	0	0	760812***ADD
NSG	2053	21	820	40000	40000	40000	0	0	0	760812***ADD
NSG	2052	21	701	46518	46518	46518	0	0	0	760812***ADD
NSG	2090	21	820	19820	19820	19820	0	0	0	760812***ADD
NSG	2090	21	820	22949	22949	22949	22949	22949	22949	760812***ADD
NSG	2098	21	820	19983	19983	19983	19983	19983	19983	*DELETE
NSG	2098	21	820	19983	19983	19983	19983	19983	19983	760812***ADD
NSG	2112	21	702	49973	49973	49973	49973	49973	49973	*DELETE
NSG	2112	21	702	49973	49973	49973	49973	49973	49973	760812***ADD
NSG	2147	21	702	22948	22948	22948	4000	4000	4000	760812***ADD
NSG	2147	21	704	17000	17000	17000	0	0	0	760812***ADD
NSG	2154	21	820	6562	6562	6562	660	660	660	760812***ADD
NSG	2155	21	701	6300	6300	6300	0	0	0	760812***ADD
NSG	2155	21	701	5000	5000	5000	0	0	0	760812***ADD
NSG	2155	21	702	4000	4000	4000	1200	1200	1200	760812***ADD
NSG	2155	21	702	600	600	600	600	600	600	760812***ADD
NSG	2155	21	702	2102	2102	2102	0	0	0	760812***ADD
NSG	2156		000	0	0	0	0	0	0	760812***ADD
NSG	2156	21	704	47898	47898	47898	4790	4790	4790	760812***ADD
NSG	2158	21	701	20790	20790	20790	2080	2080	2080	760812***ADD

Figure 25

deleted and the record containing the new code was added. (See NSG 2098)

In addition to the listing of add and delete transactions, the ASF Update Report includes a summary page as shown in the example, Figure 26. The summary provides the total number of records in the FACS PFF accessed and read during the run, the total records added and deleted in the ASF, the records read in the ASF and the final total of records stored in the ASF after the additions and deletions. The "Total ASF Records Written" should equal the "Total ASF Records Read" plus the records added and minus the records deleted. This is illustrated in the example of the summary page. Comparing these ASF totals with ASF totals from Run 1 would highlight any significant loss of data due to some internal system problem. The total ASF records added as a result of the run against the FACS New Contract File should equal the total of the records added and deleted during Run 2.

The Technical Description File (TDF) Update Report lists all the English extracted from the FACS Reportable Procurement Action File (RPAF) for new contracts with the action code "A" for add. The OUA uses this report to edit FACS English prior

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OUA MANAGEMENT INFORMATION SYSTEM  
AWCS (ASF) UPDATE REPORT

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G/C	AI	COG	AWCS	FACS-CFY-OBS	OUA-CFY-OBS	FACS-CUM-OBS	CFY-DIS	CUMULATIVE-DIS	UPDATE	MESSAGE TEXT

TOTAL PFF RECORDS READ										28027
TOTAL TRANSACTIONS REJECTED										0
TOTAL RECORDS ADDED										334
TOTAL RECORDS CHANGED										0
TOTAL RECORDS DELETED										33
TOTAL ASF RECORDS READ										22929
TOTAL ASF RECORDS WRITTEN										23230

Figure 26.

to the use of the TDF data for report generation.  
An example of part of the report is included as  
Figure 27.

TDF UPDATE PROCESSING REPORT

DESCRIPTION RECORDED IMAGE	ACTION/CAUSE	RECORD COUNTS
15***20***25***30***35***40***45***50***55***60***65***70***75***80		*** RECORD COUNTS ***
NAS 2 943701SUPERIMPOSED DISPLAY SYMBOLLOGY AS A LANDING AID	C87 ADDED TO TDF	OLD-TDF-FILE = 24992
NASW 2 943702PIOR HELICOPTERS	A66 TDF ALTERED OLD/NEW	NEW-TDF-FILE = 25010
NASW 2 943703OPERATIONAL TEST OF DATA FLAGGING & TAGGING IN NAS	C87	ADD-FILE COUNT = 0
NASW 2 943704OPERATIONAL TEST OF DATA FLAGGING AND TAGGING IN	A66 TDF ALTERED OLD/NEW	CHANGE-DELETE = 27
NASW 2 943705A'S STIF FACILITY	C87	DELETE-SET = 0
NCA 2-1070301WATER VAPOR OPACITY MODEL IN COOL STAR ATMOSPHERE	A66 TDF ALTERED OLD/NEW	
NCA 2-1070302	C87	
NCA 2-1070303ATMOSPHERE	A66 TDF ALTERED OLD/NEW	
NCA 2-1070304MODIFICATION OF POLYMERIC SUBSTRATA	C87	
NCA 2-1070305MODIFICATION OF POLYMERIC SUBSTRATA	A66 TDF ALTERED OLD/NEW	
NCA 2-1070306ENERGY DISSIPATION IN THE MOON	C87	
NCA 2-1070307ENERGY DISSIPATION IN THE MOON	A66 TDF ALTERED OLD/NEW	
NCA 2-1070308THE DEMONSTRATION OF A NEW AUGER MICROPROBE	C87	
NCA 2-1070309NEW AUGER MICROPROBE DEMONSTRATION	A66 TDF ALTERED OLD/NEW	
NCA 2-1070310ADRENAL MEDULLARY FUNCTION IN ACUTE AND CHRONI	C87	
NCA 2-1070311ADRENAL MEDULLARY FUNCTION IN ACUTE AND CHRONIC	A66 TDF ALTERED OLD/NEW	
NCA 2-1070312	C87	
NSG 219301ELECTROCHEMICAL CARBON OXIDE CONCENTRATION USING	C87 ADDED TO TDF	
NSG 219302WATER-SALT ELECTROLYTES	C87 ADDED TO TDF	
NSG 219303TRANSONIC FLOW AROUND WINGS, BODIES AND WING-BODY	C87 ADDED TO TDF	
NSG 219401CONFIGURATIONS	C87 ADDED TO TDF	
NSG 313201DIGITAL SIMULATION OF DYNAMIC STABILITY AND	C87 ADDED TO TDF	
NSG 313202PARALLEL PARALLELING OF ERDA-NASA WIND TURBINE	C87 ADDED TO TDF	
NSG 313203GENERATORS WITH SMALL POWER SYSTEMS	C87 ADDED TO TDF	
NSG 313401DEVELOPMENT OF A FLUIDIZED BED COMPUTER MODEL	C87 ADDED TO TDF	
NSG 514201ULTRAVIOLET STUDY OF V PUGGIS	C87 ADDED TO TDF	
NSG 514401ULTRAVIOLET STUDIES OF HEAVY-ELEMENT ABUNDANCES	C87 ADDED TO TDF	
NSG 514402IR STARS	C87 ADDED TO TDF	
NSG 514701STUDY OF MASS FLOW IN THE MASSIVE SPECTROSCOPIC	C87 ADDED TO TDF	
NSG 514702BINARY	C87 ADDED TO TDF	
NSG 514901OBSERVATIONS OF HOT WHITE DWARFS FROM SAS-3	C87 ADDED TO TDF	
NSG 728601INFRARED SPECTROSCOPY OF JUPITER AND SATURN	C87 ADDED TO TDF	
NSG 729001MEMBRANES AND CIRCADIAN RHYTHMS IN PLANTS	C87 ADDED TO TDF	

Figure 27

C. Run 4 - Negative Adjustment of Financial Data

1. Purpose

FACS is an accounting oriented system in which adjustments to records and corrections are made by commonly accepted debit-credit entries. As a result, there are numerous individual CFY entries which have negative values. These, of course, are correct in an accounting sense, but cause misleading or confusing results from a program management standpoint. As the OUA-MIS is a management based system, special arrangements are needed to translate the accounting design bias of the FACS file to the programmatic bias of the OUA file. Indeed, interagency university data exchange agreements require the OUA approach, rather than accounting detail.

Run 4 makes this translation by performing adjustments to negative or de-obligation money figures extracted from FACS during Run 2. This provides OUA-MIS with actual, positive obligation amounts provided for the current fiscal year for each contract rather than accounting system figures which may be negative, indicating funds left over from a previous fiscal year or a bookkeeper-type transfer between different accounts for the same



contract.

Before money figures are added to the AWCS Statistics File (ASF) from the update file created in Run 2, certain internal system calculations are performed to eliminate negative values; however, the original FACS figures are retained on the ASF as well as the adjusted OUA Figures. OUA Figures are always used for report generation, while FACS data can be used to ensure 100% reconciliation of records, i.e., the strength of the OUA adjustments is that all data are solidly based on official, FACS, agency-wide accounting records.

A contract can be composed of a single account or many separate accounts and the adjustments made, even in multiple account situations, will provide overall positive figures of the actual amount of money obligated for the CFY or an approximation that is well within the limits of accuracy of the financial management system at the contract detail level. Each account within a contract has a separate AWCS code assigned to differentiate the accounts.

The following examples outline the automated calculations that will be performed for different types of contract money configurations and the resultant figures which will be added to the ASF.

They fall into eight categories which cover all of FACS situations where the inclusion of negative values is routine. In these cases, adjustments can be made by fixed guidelines. In a small number of cases, adjustments require judgement; these are highlighted for manual action. Note that each Figure represents a separate account, i.e., they would not normally "roll-up" left to their own devices.

- | <u>Money Figure Type</u>  | <u>Action Taken</u>   |
|---|---|
| <ul style="list-style-type: none"> <li>• All accounts for a contract contain positive values for CFY Obligation fields. This is the most common type of FACS entry. It is satisfactory, as is. (1) *</li> </ul> | <ul style="list-style-type: none"> <li>• All account records are added, as is, to ASF.</li> </ul> |

		<u>FACS Figures</u>	<u>Figures Added to ASF</u>
		CFY Obligations	
NAS 1 11958			
AWCS Code			
accounts	{	07600000	150,000
		07601601	130,000
		09970000	120,000

\* Reference to program routines described in the excerpt from the programmers guide which is included at the end of this section.

- Funds obligated in a prior fiscal year on a single account are deobligated. (2)
- The negative value set to 0.

	<u>FACS Figures</u>		<u>Figures Added to ASF</u>
NAS 2 63142	CFY Obligations		
AWCS Code			
account 06311000	-5,000		0

- Same as above, except these are multiple, negative CFY entries. No positive entries are present. Two are common; four or more are rare. (6)
- The negative values are set to zero.

	<u>FACS Figures</u>		<u>Figures Added to ASF</u>
NAS 2 60241	CFY Obligations		
AWCS Code			
accounts { 03210411	-5,000		0
{ 06300000	-1,000		0
{ 06310000	- 500		0

- There is a simple bookkeeping transfer of funds from one account to another, evidenced by matched negative-positive CFY obligations in two different accounts. (2)
- Both values are set to zero.

		<u>FACS Figures</u>	<u>Figures Added to ASF</u>
NAS 1 53210		CFY Obligations	
	AWCS Code		
accounts	{ 02738756	-10,000	0
	{ 05918764	10,000	0

- Same as above, except there is more than one neg-positive set, i.e., simultaneous transfers within several accounts. Two sets are not uncommon; three or more are rare. (2)
- All values are set to zero.

		<u>FACS Figures</u>	<u>Figures Added to ASF</u>
NAS 1 49112		CFY Obligations	
	AWCS Code		
accounts	{ 05916111	150,000	0
	{ 05916000	-150,000	0
	{ 06307111	30,000	0
	{ 04132871	- 30,000	0

- A simple combination of the above case involves transfer of unequal amounts of funds from one account to another, coupled with de-obligation of prior year funds. For this case the sum of the FACS figures is always negative (5).
- Each account money amount is set to zero.

		<u>FACS Figures</u>		<u>Figures Added to ASF</u>	
NAS 2 35658		CFY Obligations			
AWCS Code					
accounts	{	05551212	10,000		0
		06383297	-15,000		0
		05259986	4,000	= -4,000	0
		05269904	- 3,000		0

- In a more complex version of the above simple combination there are some accounts with positive values and some whose negative values total less than \$1,000. The "rolled total" for all the accounts is positive and greater than zero. (4)
- The negative accounts are set to zero, and the positive accounts added, as is to the ASF. (Note: This simple adjustment results in an approximation. The AWCS obligation will be higher than the actual obligation by a maximum of \$998. This situation occurs infrequently and resultant error introduced is well within

system design limits, i.e., it is similar to rounding error at the 1000's level.

<u>FACS Figures</u>		<u>Figures Added to ASF</u>	
NAS 2 22411		CFY Obligations	
AWCS Code			
accounts {	05590100	11,000	11,000
	02445566	10,000	10,000
	03297638	-300	0 = 27,000
	09986525	-400	0
	09000273	6,000	6,000
	-700	{ 26,300	{ 27,000

- An "unequal pair" results when there is a simultaneous obligation and transfer of funds between accounts. Thus there are only 2 accounts for the contract and one has a negative value greater than \$1,000 and the rolled total of the 2 accounts is positive and greater than zero. (3)
- The negative value is subtracted from the positive amount and the negative figure is set to zero. Thus, the obligated amount is correct even though one account shows zero funding. (This situation is quite rare; hence the resultant approximation is not critical. It only affects those few reports in which Cog. office or UPN sorts are specified.)

		<u>FACS Figures</u>		<u>Figures Added to ASF</u>
NAS 1 69418		CFY Obligations		
		AWCS Code		
accounts	{	09380921	5,000	3,500
		03568820	-1,500 = 3,500	0

- There are more than six accounts with a negative/positive mixture of values or there is no clear pattern which can be described by the above situations.  
(7)
- Figures are added to the ASF, as is, and they are listed on the output report generated for this review by OUA. OUA adjusts manually.

		<u>FACS Figures</u>	<u>Figures Added to ASF</u>	<u>OUA Manual Adjustment</u>
NAS 1 69418		CFY Obligations		
		AWCS Code		
accounts	{	02810771	8,000	8,000
		094161 6	9,000	9,000
		05254784	-10,000	-10,000
		00560240	40,000	40,000
				30,000

Note: This configuration does not fit any of the situations above as the negative value is greater than \$1,000 and there are more than two accounts to be reconciled.

While it is difficult to design an algorithm to automatically adjust such negatives, the correct adjustment is readily determined by visual inspections; new funding has been added to the first two account lines, the existing funds in the third account have been transferred to the fourth, and 30,000 in new funding has been added to the fourth account at the same time. The necessary OUA manual adjustment is input on a FM run to the AWCS file.

	<u>FACS</u> <u>Figures</u>	<u>Figures Added</u> <u>to ASF</u>	<u>OUA Manual</u> <u>Adjustment</u>
NAS 1 85653	CFY Obligations		
AWCS Code			
09713900	500,000	500,000	0
04912166	-500,000	-500,000	0
04956962	2,000	2,000	0
02819557	-2,000	-2,000	0
09373677	3,000	3,000	0
03560225	-3,000	-3,000	0
02736323	4,000	4,000	0
02448100	-4,000	-4,000	0

Note: The above figures are adjusted by setting all the values to zero, but there are more than six accounts which exceed the limit set for the automatic adjustment. The manual adjustment, therefore, is very simple bookkeeping transfers between accounts.

The arbitrary limit of six accounts for automatic adjustment purposes has been set to reduce the complexity of the program. An estimated 99.8% of the records can be adjusted automatically by the first eight tests, while the number of tests required to adjust the remaining 0.2% is incalculable.



	<u>FACS</u> <u>Figures</u>	<u>Figures Added</u> <u>to ASF</u>	<u>OUA Manual</u> <u>Adjustment</u>
NAS 2 46853 CFY Obligations			
AWCS Code			
05492191	-517	-517	0
05914626	517	517	0
05342426	-764	-764	0
09949500	5,000	5,000	5,000
05484223	5,350	5,350	5,350
02569614	33,230	33,230	33,230
09381117	-47,554	-47,554	0
06288080	49,132	49,132	814

Note: This is a more typical example of a multiple-record type contract which must be adjusted manually. In such large cases, only approximations can be used; however, they should be carefully chosen to eliminate all of the negative values while at the same time introducing the minimum amount of error. The original FACS and adjusted totals must be the same: 44,394 in this example.

In summary, the effect of all of the above procedures is to insure that the current fiscal year obligations figures used by OUA reflect the real amounts obligated to schools during the fiscal year. Thus, these amounts are a true measure of technical program decisions and the magnitude of the yearly university effort. On the other hand, the cumulative figures are net, i.e., all of the accounting debits and credits are entered in the final, total funding distribution from project inception-to-date

as available.

2. Requesting Run 4, Negative Adjustment

NASA Form 35, the Customer Service Request Form, is completed as shown:

Run 4 Negative Adjustment

a. X Automatic

Run 4 is requested at the same time a request for Run 2, Update from FACS, is submitted. This allows for all negative adjustments to be made to the data extracted from FACS prior to processing the created update files to add the data to the OUA-MIS data base.

3. Run 4. Output Reports Generated

One of the reports produced after execution of Run 4 is the ASF Negative CFY Obligation Processing Exception Report, Figure 28. All the contract records which are altered as a result of negative adjustment calculations are listed, accompanied by a statement describing the money type configuration. Inclusion on the list confirms that negative processing logic has been applied. In addition, contracts with more than six records or a configuration beyond the scope of the program logic are also listed.

ASF NEGATIVE CFY OBLIGATION PROCESSING EXCEPTION REPORT

BUZ40102

NAS	ACTG	INST	COG CODE	CFY OBLIGATIONS	CUM OBLIGATIONS
NAS 2 7785	2	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 7877	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 7882	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 7892	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 7916	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 8108	4	RECORDS OF GCNUM	OF WHICH	2	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 8444	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 8454	2	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 2 8898	6	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
ASF RECORDS (IN GRANT/CONTRACT NUMBER GROUPINGS) HAVE NOT BEEN ALTERED IN THE OUTPUT FILE					
AWCS CODE	ACTG	INST	COG CODE	CFY OBLIGATIONS	CUM OBLIGATIONS
06400000	21		680	110.00	110.00
06405000	21		680	2,460.00	2,460.00
09755001	21		980	2,553.00	2,553.00
03520203	21		850	3,320.00	3,320.00
09920000	21		030	50,015.00	50,015.00
09970000	21		030	-50,015.00	5,500.00
*****					
NAS 3 17508	2	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 3 17855	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 3 17861	1	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.
NAS 3 19434	3	RECORDS OF GCNUM	OF WHICH	1	ENTRIES HAVE A NEGATIVE CFY OBLIGATION.

Figure 28

For these contracts, the actual CFY Obligation and CUM Obligation amounts are printed out for each contract account. This allows for manual assessment of more complicated money configurations and resolution by OUA. Any adjustments required for these contracts are submitted in Run 3, using transcripts for the input data as described on pages 186 - 209.

Adjustments to Negative Obligations

OUA is concerned with reporting the status of newly obligated funds to universities during the course of a fiscal year. Deobligations and reprogramming can introduce negative obligations into data provided by the Financial and Contractual Status (FACS) System. OUA is interested in reporting positive obligation values. OUA's experience has led to the development of procedures to identify these accounting actions and techniques to derive the OUA obligation values from FACS data. The OUA obligation values are used for reporting purposes throughout this system and responsibility for these values rests solely with the Office of University Affairs. The techniques that have been incorporated into OUA-MIS are illustrated in the material below, taken from the OUA-MIS Programmer Guide. "ASF" refers to AWCS data at the seven-position level within the OUA-MIS data base. Each record in the file contains the following monetary parameters: CFY obligations, cumulative obligations, CFY disbursements, and cumulative disbursements. The data contained in these fields are as extracted from FACS. In addition, each record contains a CFY obliga-

tion report parameter and a cumulative obligation report parameter. These last two parameters are used throughout the system for report purposes and are the OUA obligation values referred to above. When data are picked up from FACS, the FACS current fiscal year obligation value is placed into the CFY obligation field and the CFY obligation report field; the FACS cumulative obligation (derived by algebraically adding the FACS prior years' obligations and the FACS current fiscal year obligation) is placed into the cumulative obligation field and the cumulative obligation report field. In the discussion below, references to CFY obligations apply to the CFY obligation report parameter.

After housekeeping has (been) completed, the input ASF, output ASF and the program's output processing report file are opened. ASF record processing consists of reading input ASF records, which belong to a single Grant/Contract Number group, into a table in working storage. As each ASF record of a Grant/Contract Number group is read and moved to the table, counts are taken if the CFY Obligations field is negative as well as a count of the total number of records of the Grant/Contract Number group placed in the table. If a particular record of a Grant/Contract Number group has a zero CFY obligations field this record is not included in the counts nor is it placed in the table. A record with a zero CFY obligations field is written directly out on the output ASF.

Records of a Grant/Contract Number group are read and handled in the above manner until one or the other of two conditions occurs.

If a Grant/Contract Record Number group contains more than one hundred records which have non-zero CFY obligations fields, all of the records belonging to this group are output directly to the ASF and listed on the output exception report. If the first record of the next Grant/Contract Number group is encountered and the number of ASF records of the Grant/Contract Number group in the table is not greater than one hundred records, the records in the table are internally sorted on the absolute value of their CFY obligations fields. If there are no records for the current Grant/Contract Number group in the table (because all the records in the group has zero CFY obligations fields and were output directly onto the ASF) processing branches to handling the first record of the next Grant/Contract Number record group.

After the ASF records in the table have been sorted internally in the table the total value of all the CFY obligations fields of the sorted records is computed (i.e., CFY obligations are "rolled" to "Grant/Contract level"). Next, a series of tests are performed upon the sorted records in the table in order to determine if any alterations of the records' CFY obligations fields are to take place before they are written out on the ASF. The conditions tested for and the resulting record alterations, if any, are as follows:

- 1) If there are no records which contain a negative CFY obligations field, all the records are written out on the ASF, no alterations having taken place.

- 2) If there are six or less record entries in the table and the "rolled total" for the group is zero, each CFY Obligations field of record is set to zero prior to the records being written out on the ASF and a message is printed stating that these records have been altered.

- 3) If there are only two records in the table and one of them has a negative value

greater than \$1,000.00 and the "rolled total" is positive and greater than zero, the CFY obligations field of the record which contains the negative value is algebraically added to the record containing the positive CFY obligations value before the negative CFY obligations field is set to zero. Finally, the two records are written on the ASF and a message is printed as in #2 above.

4) If there are some records with positive CFY obligations and some records with negative obligations not greater than \$1,000.00 and the "rolled total" for the whole group is positive and greater than zero, only the negative CFY obligations fields are set to zero before all the records are written out on the ASF. Again, as in #2 above, a message is printed.

5) If the records in the table have positive and negative obligations and the "rolled total" is negative, the CFY obligations field of each record is set to zero. The records are again written onto the ASF and a message produced.

6) If all the records in the table have a negative CFY obligation value those records are processed in the same manner as described in #5 above.

If the records in the table do not meet any of the conditions described above, the records are written out unaltered on the ASF and each record is also listed on the output exception report.

Once the records in the table have been tested, altered or not altered and written, the program branches resume processing of the first record of the next Grant/Contract Number group.<sup>1</sup>

It is important to note that this logic modifies only the simplest negative obligation conditions.

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<sup>1</sup> OUA-MIS Programmer Guide, Section IV.A.



All modifications are printed on a report for review by the user and may be changed by direct user up-date action. The more complex conditions are not modified by the system. They are made available to the user as his responsibility. If no action is taken, the corresponding report values will contain data as they come from FACS. Most important, this entire process of adjusting negative obligations must be implemented by the user by executing run 4, negative adjustments, automatic option. If the run is not executed, the report parameters will contain data as extracted from FACS without any adjustments.

OUA Maintenance of Data Base Files

A. Run 3 - File Maintenance

Run 3 options enable the user to correct, add or delete data within the data base files. More specifically, the Run 3 options are used to update the University Reference File (URF), input Form 1356 data on contracts for inclusion in the data base files (PCF, CDF and TDF) and make any required corrections to data resulting from manual edit of errors on reports on the PCF, CDF, TSF and ASF.

The discussion of each of these options, given below, includes the purpose of the run application, the completion of the appropriate transcript for data input, and the generation of reports for edit purposes.

The OUA-MIS Customer Service Request Form and appropriate transcripts are completed when requesting Run 3 options. An X is placed in the appropriate space to indicate the option(s) desired. Any combination of the three can be requested at the same time.

Run 3 - File Maintenance

- a.  UNICODE UNILIST (T. 3-4)
- b.  Form 1356 Input (T.2)
- c.  Edit Corrections (T.5-8)  
(Check Transcripts or Cards attached)
  - 1.  (T.8) (BUZ32101) PCF
  - 2.  (T.7) (BUZ32201) TDF
  - 3.  (T.6) (BUZ32301) ASF

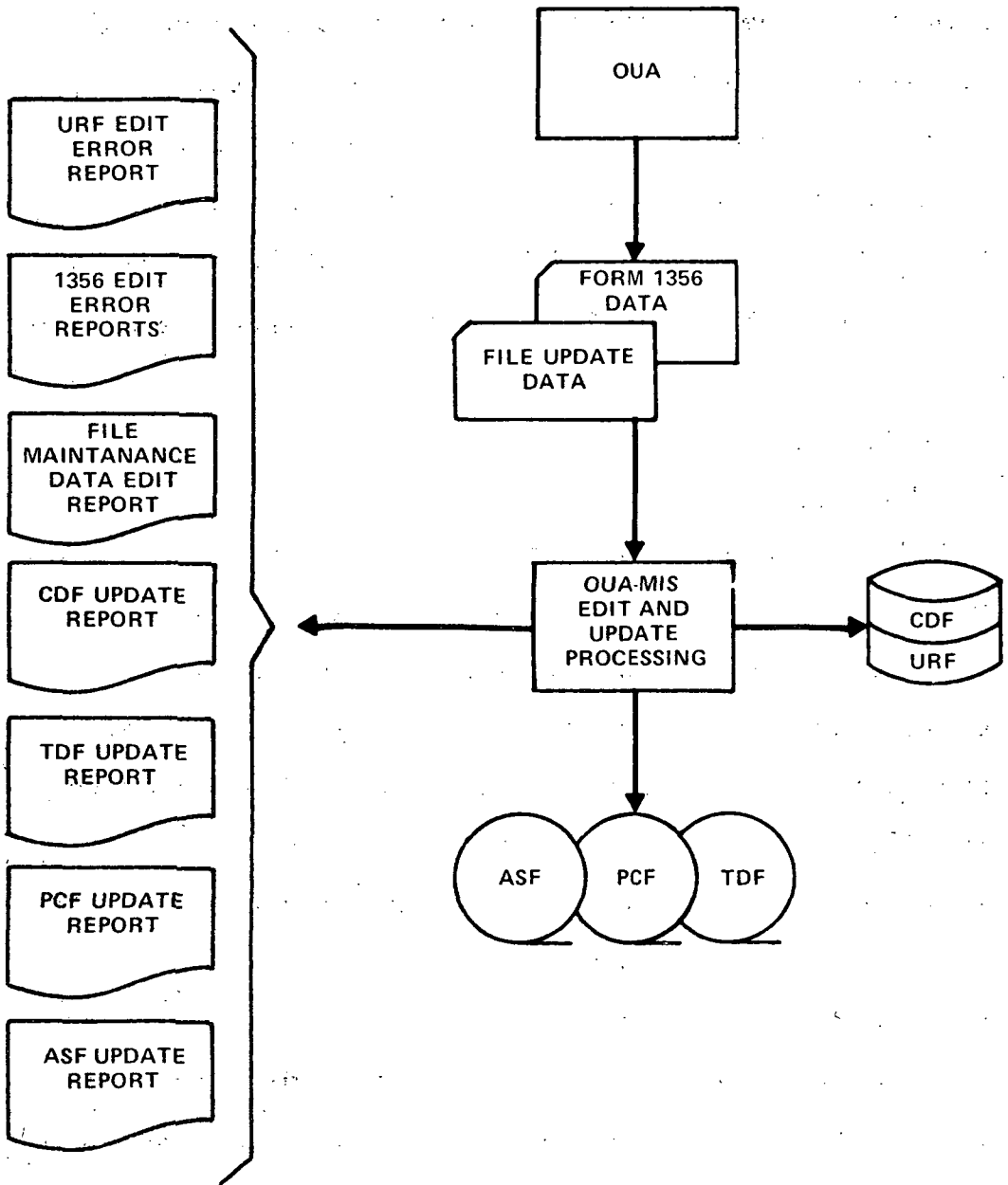


Figure 29. RUN 3. FILE MAINTENANCE  
(System Maintenance Data Flow)

The numbers of the correct input transcripts are shown in parentheses for each option. Below option c., the user must indicate which transcript(s) or comparable cards are being submitted, i.e., corrections for the Policy Compliance File (PCF), the Technical Description File (TDF), and/or the AWCS Statistics File (ASF). This assists the production control staff in processing the data.

1. Option a. - UNICODE/UNILIST

a. Purpose

This option allows for maintenance of the University Reference File (URF). The URF may be defined as containing two types of university data. Data describing the university, e.g., name, OUA Code, Type of School, etc., are used to generate the UNICODE report which provides a complete listing of the universities, their associated codes and standard names. The data is input to the URF using Transcript 3.

The other data in the URF provides different lists used for correspondence purposes. The data include names and addresses of universities, university presidents, research contacts and business managers as well as non-university organizations or persons interested in receiving OUA material. These lists may be generated as standard

printouts or as mailing labels. This type of data is input using Transcripts 4 and 4a.

Universities may be added to the URF for a variety of reasons: The school submits a proposal to NASA for the first time, a grant or contract is awarded, or the school may be added at its request for the sole purpose of being included on OUA's mailing list. (See preparation of T.3 below.) Non-university subscribers are assigned the mailing list only status by placing an "X" in column 52 of Transcript 3. In addition, a special OUA code is assigned to distinguish them from schools. The first three digits of the OUA code are always entered as "999" followed by a unique 5-digit sequence assigned and maintained by OUA. The "999" digits will prevent the names from appearing on reports when data are sorted using the OUA code. The "X" ensures that the non-university names and addresses will not appear on reports when data are sorted by elements other than OUA codes. (The OUA code and the "X" in column 52 can be entered alone to create the record field; in a subsequent run the address information can be input using Transcript 4a as discussed below. Some letter must also be entered in column 9 to satisfy the input edit.)

b. Preparation of Input Transcripts 3, 4, and 4a.

Transcript 3

An example of Transcript 3 with typical entries for the addition of university data to the URF is shown as Figure 30. A discussion of each required entry is provided to explain completion of the transcript.

Data Field

Comments

- OUA Code                      An eight-digit code to uniquely identify the university is entered in columns 1-8. (Non-university subscribers receive a code with the first three digits assigned as "999".)
- University Name - Short Form      Up to 20 alphabetic characters can be entered in columns 9-28 as a shortened version of the university name.
- Alpha Code                      The FACS alpha code is entered, if known. If unknown, a dummy alpha code is entered for a new school, composed of the first letter of the university name followed by 6 zeros to fill the field. Subsequently, the alpha code can be obtained from the FACS report printout made available to OUA, and the code can be manually added as an update using Transcript 3.
- OUA Proposal                      Historically, the OUA Proposal Code was added using Transcript 3, but for the present it is not required for input. The codes are retained in the University Reference File (URF) and space is still available on the transcript for future usage or updating.

FILE ID.		DATE		PAGE 1 OF 1		PAGES													
117700001		4/12/77																	
ACTION CODES: A, C, D				NOTE: Asterisk (*) in first position of a field blanks entire field.															
TERM NO	OUA CODE		UNIVERSITY NAME - SHORT FORM		ALPHA CODE		OUA PROPOSAL CODE		UNIVERSITY STATUS CODING		STUDENT POPULATION		F.I.C.E. CODES		CONGRESS	DISTRICT	ACTION CODE	CARD ID	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14					15
1	023010	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500
2	006135	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	008015	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
4	059092	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500	0500
5	999000	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900	9900
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NOTES:  
 MHQ DIV FORM 502 PER 73  
 NASA HQ

Figure 30.

- Type of School

Two-character alphabetic code entered in columns 42-43. The only codes acceptable are listed below.

GR = Public, State Related  
GF = Public, Federal  
GS = Public, State  
GL = Public, Local  
GC = Public, State and Local  
PN = Private, Independent, Non-Profit  
PP = Private, Organized as Profit making  
PD = Private, Affiliated with Religious Groups

These classifications were established by the Office of Education and the codes assigned to each school can be obtained from the Office of Education Directory for Colleges and Universities, published by the National Center for Education Statistics.

- Active G/C Flag
- Active G/C Year

These data fields are internally generated by the system (during Run 5) to designate the current status of a school's relationship to NASA, i.e., the school has/had at least one active contract. Columns are provided in the transcript to allow for OUA manual updating, if required. The Active G/C Flag is updated by placing an "X" in the appropriate column and Active G/C Year is updated by entering the numeric year. Manual updating would normally not be necessary as the fields are automatically kept current each time the data base files are updated. (For a discussion of OUA contract status codes see pages



- Active OB Flag
- Active OB Year

As above, these fields are system-generated and specify the school's active status based on obligated funds, i.e., the school has/had obligated funds. If a manual update is required the columns are provided on the transcript and an "X" for the Flag or the numeric OB Year is entered, as above.

- Minority School Flag

If a university is classified as a minority school, one of the codes listed below is placed in column 50:

N = Black  
 C = Spanish-Speaking  
 A = American Indian  
 H = Hispanic  
 W = Women

A university is classified as a minority school if 50% or more of the student population represents a minority group. This information can be obtained from the Office of Education Directory.

- Mailing List Flag

An "X" is placed in Column 52, if the subscriber being added to the URF is for mailing list only status and is a non-university.

- Student Population

The actual student population of the school is entered in columns 56-61. The number is left-justified with leading zeros, if required. This information can be obtained from the OE Directory. It should be updated each time a new OE directory is issued.

- NSF FICE Code                    This is an interagency data exchange code used to uniquely identify a school. The codes are contained in the FICE Code Book.
  
- OE FICE Code                    An interagency data exchange code obtained from the OE directory. (Currently, space is reserved for possible future use of these codes.)
  
- Congressional District            The two-digit numeric code, representing the graphic location of the university is entered in columns 76-77.
  
- Action Code                    An action code must be entered in column 78.
  - A = add data
  - C = change data
  - D = delete data
  
- Card ID                        The card identification code in columns 79-80 must be 21 for all Transcript 3 input.

Transcript 4

This transcript, shown on the next page as Figure 31, is used to input UNILIST data, i.e., names and addresses for the various mailing lists produced from the URF data. The type of subscribers, i.e., university presidents, business managers or research coordinators, is designated by the card identification code placed in columns 79-80 for each line entry.

The example of Transcript 4 shows address

OUA MIS INPUT TRANSCRIPT NO. 4 -- UNIVERSITY PERSONNEL MAILING LIST INPUT

DATE 4/12/77 PAGE 1 OF PAGES

FILE I.D. RI 710001

NOTE: Asterisk (\*) in first position of a field blanks entire field.

ACTION CODES: A, C

OUA CODE (CC 1-8)	ENGLISH TEXT (CC 9-51. Left Justify)	AREA CODE (CC 52-54)	PHONE NO. (CC 55-62)	EXT. (CC 63-67)	ACTION CODE (CC 78)	CARD NO. (CC 79-80)
02301005	MR. EDWARD G. KAEUBER PRESIDENT				A	22
	MR. LESLIE C. BREWER TREASURER					23
	MR. SAMUEL A. ELIOT VICE PRESIDENT FOR RESEARCH COLLEGE OF THE ATLANTIC EDEN STREET BAR HARBOR, MAINE 04609	207	288-5015			24
01000250	MR. EDWARD T. CRAWFORD BUSINESS MANAGER				C	25
01802500					C	30

Figure 31.

entries for each type of subscriber. Note the different card identification codes which appear in columns 79-80. These are summarized as follows:

<u>Card ID Code</u>	<u>Card Use</u>
22	President's Name
23	President's Title
24	Business Manager's Name
25	Business Manager's Title
26	Research Coordinator's Name
27	Research Coordinator's Title
28	University Name
29-31	Address Lines

It is important to use the appropriate Card ID Code for each line entry as the generation of a report may depend on retrieval of particular line English. For example, Line 28, the university name, is used for the Greenbook report. In addition, a line entry made with the wrong card ID could cause an error message on a report listing. For example, if the President's name is entered on 23 in error, leaving 22 blank, the system reports may show the error message, "name missing."

For the completion of Transcript 4, the following data elements are entered:

- OUA-Code                    The appropriate 8-digit code identifying the university is entered in columns 1-8 for each line entry for a complete address.
- English Text                The 43-position English (name, title and address) should be left-justified.

Only 39 characters a line will print out on mailing labels. Additional characters extending beyond the dotted line (39-character limit) will appear on report listings but will be truncated on labels.

- Area Code  
Phone Number  
Extension  
Only telephone numbers for business managers and research coordinators are entered as part of line 24 for business managers and 26 for research coordinators.
- Action Code  
The only action codes used are A for add and C for change. (Deleting URF data is accomplished through the use of Transcript 3).
- Card Identification Number  
Entered in columns 79-80 as described above.

#### Transcript 4A

This transcript may be used to build the mailing list of non-university subscribers. However, it should be noted that records must be initially created by submitting the OUA codes on Transcript 3 in a previous run. Transcript 4A was added to the system for clerical efficiency in creating this mailing list. An example of this transcript is shown as Figure 32.

A special ID code is used for this input to distinguish the entries from the normal UNICODE/UNILIST entries, i.e., a prefix "999" is used for the first three digits of the ID code

OUA - MIS INPUT TRANSCRIPT NO. 4A - GREENBOOK MAILING LIST INPUT

FILE TO: [ ]	DATE: [ ]	PAGE: [ ]	DATE: [ ]
--------------	-----------	-----------	-----------

I.D. CODE (CC 1-8)	ENGLISH TEXT (33 SPACES) (CC 9-41, left justify)	GB XXX ID XX (CC 12-17)	ACTION CODE (CC 78)	CARD NO. (CC 79-80)
99900098	Lewis Research Center ATTN: Mr. Philip Stone Code 3-13 21000 Brookpark Road Cleveland, Ohio 44135	GB 1 098	C	26 27 28 29 30

OUA NOTES

1. Asterisk(\*) in first position of a field blanks entire field.
2. CC 9-17 is a single field for blanking or changing purposes.
3. Type double space.
4. Only Card Numbers 26-31 are valid.

Figure 32.

columns 1-8 on the transcript. In addition only lines 26-31 (card numbers) are valid. Completion of Transcript 4A is described below:

- I.D. Code                      Up to eight digits can be entered for the I.D. code. The first three must be "999" followed by a sequential numeric sequence, e.g., 00001, 00002, etc.
  
- English Text                    The name and address are entered in columns 9-41, left-justified and doubled spaced. There are six lines available using card numbers 26-31.
  
- GB XXX  
  ID XX                            In columns 42-47, two entries are made, one on line 26 and one on 27. On line 26 "GB" is entered followed by the actual number of Greenbooks to be sent, e.g., GB10. On the next line, the last 5 digits of the ID code are entered, as this is in fact the assigned OUA code.
  
- Action Code                    This code is always "C" which is pre-printed on the transcript.
  
- Card Number                    Only card numbers 26-31 are valid.

c. Output Reports Generated

The OUA-MIS university data edit report and the University Reference File Update Reports (Shown as Figures 33 and 34) result from this option. The input card images are listed for

OUA-MIS UNIVERSITY DATA EDIT REPORT

ERROR MESSAGES

BUZ30101

\*\*\*5\*\*\*10\*\*\*15\*\*\*20\*\*\*25\*\*\*30\*\*\*35\*\*\*40\*\*\*45\*\*\*50\*\*\*55\*\*\*60\*\*\*65\*\*\*70\*\*\*75\*\*\*80

04802700UNIV TEXAS-S ANTONIAU000000 GS 0016200001479010115 21A21

YYYYYYYYYYYYYYYY

RECORD COUNTERS: ADDS 1 CHANGES 37 DELETES 0 TOTAL RECORDS 43 REJECTIONS

NOTE: The hyphen in the university name results in a non-fatal (-type) "error". However, there is obviously no actual error; the message is ignored.

Figure 33.



03/21/77

CUA MANAGEMENT INFORMATION SYSTEM

PAGE 1

OUA-MIS UNIVERSITY DATA EDIT REPORT

ERROR MESSAGES BUZ30101

\*\*\*5\*\*\*10\*\*\*15\*\*\*20\*\*\*25\*\*\*30\*\*\*35\*\*\*40\*\*\*45\*\*\*50\*\*\*55\*\*\*60\*\*\*65\*\*\*70\*\*\*75\*\*\*80

0061470 REV JOHN LO SCHIAVO, S. J.  
XXXXXXXXXX

C22 INVALID OUA CODE

0061470 PRESIDENT  
XXXXXXXXXX

C23 INVALID OUA CODE

0486500 UNIV OF TEXAS HELATH SCI CTR-SAN ANTONIO  
XXXXXXXXXX

C28 INVALID OUA CODE

RECORD COUNTERS: ADDS 0 CHANGES 5 DELETES 0 TOTAL RECORDS 8 REJECTIONS 3

Figure 34.

any data elements in error. These are underlined with X's for fatal conditions and with Y's for non-fatal (or warning) conditions. A fatal condition will cause the input card to be totally rejected and an error message will appear on the edit report. A warning condition may not be accompanied by a message. The following error messages may appear:

ERROR MESSAGES

<u>Message</u>	<u>Meaning</u>
INVALID OUA CODE	The OUA code contained non-numeric characters. Correct and resubmit the transcript.
INVALID ACTION CODE	The action code has been input as some value other than A (add), C (change) or D (delete). Correct and resubmit the transcript.
UNIV NAME BLANK	On a card 21 with action code A, the university name field was blank. The university name field must be provided when an entry is added to the URF.

BAD ACTION CODE      An action code D was used on one of the cards number 22-31. This procedure is not allowed. Deletion of a URF entry is achieved by using card 21. Cards 22-31 can only carry C for change.

DUPLICATE CARD REJECT      A duplicate input card was submitted. Both cards are rejected.

NO CARD 21      Cards without a card 21 have been submitted with an action code A. Card 21 is required for an add transaction.

OUA CODE NOT ON URF      An attempt has been made to change or delete an entry that does not exist on the URF.

OUA CODE ON URF      An attempt has been made to add a university that is already on the URF.

2. Option b. Form 1356 Data Input

a. Purpose

Form 1356 data received from the originating installations can be input directly by OUA using Transcript 2. Form 1356 (previously shown as Figure 3) is repeated on the next page. Only new Form 1356 data are entered on Transcript 2; changes or corrections to Form 1356 data already processed requires use of Transcripts 5 and/or 8.

A NASA Form 1356 is required for each obligation to an educational institution. These forms are prepared at the basic contract or modification level. For each case involving a funding action, a NASA Form 1356 must be included in the procurement package by the initiator. In addition, the procurement office must initiate a NASA Form 1356 in several situations (type of action) not involving obligation of funds, which includes the following modifications:

- No-cost time extensions
- A change in principal investigator or technical officer
- Additional funding (excluding incremental funding)

<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION</b> <b>C.A.S.E. REPORT ON COLLEGE AND UNIVERSITY PROJECTS</b> <b>PART I - TECHNICAL DATA (To be completed by procurement request initiators)</b>												
Procurement request initiators are required to complete part I and to include this form with their procurement requests (PR's) for certain obligations to educational institutions. Forms need not be submitted with all PR's; for details, see the brief instructions on the back of this page. <b>PLEASE TYPE OR PRINT LEGIBLY. ATTACH COMPLETED FORM TO PROCUREMENT REQUEST.</b>												
1. UNIVERSITY NAME, CITY AND STATE						3. PRINCIPAL INVESTIGATOR (Two initials and surname)						
2. PROPOSAL NO						4. SECOND PRINCIPAL INVESTIGATOR (If any, two init. and surname)						
6. PRIMARY NASA TECHNICAL OFFICER (Two initials and surname)						7. INSTALLATION NAME			8. MAIL CODE (HU only)			
9. ALT. NASA TECHNICAL OFFICER (If any, two initials and surname)						10. INSTALLATION NAME			11. MAIL CODE (HU only)			
12. WILL THIS PROJECT BE CONDUCTED IN OR BY A MEDICAL SCHOOL? <input type="checkbox"/> YES <input type="checkbox"/> NO												
13. MAIN OBJECTIVE OF WORK (Circle one code)		R&D ▶ 11 BASIC RESEARCH			12 APPLIED RESEARCH			13 DEVELOPMENT				
		OTHER ▶ 06 OTHER ACTIVITIES RELATED TO SCIENCE AND ENGINEERING			09 R & D PLANT & EQUIPMENT			02 TRAINING GRANT (NGT prefix only)				
14. FIELD OF SCIENCE OR ENGINEERING (Circle the one code number which represents the most appropriate field. See instructions on reverse)												
PHYSICAL SCIENCES		ENVIRONMENTAL SCIENCE (Terrestrial and extraterrestrial)			ENGINEERING			LIFE SCIENCES			SOCIAL SCIENCES	
11 ASTRONOMY		31 ATMOSPHERIC SCIENCES			41 AERONAUTICAL			81 BIOLOGY			21 ANTHROPOLOGY	
12 CHEMISTRY		32 GEOLOGICAL SCIENCES			42 ASTRONAUTICAL			82 CLINICAL MEDICAL			22 ECONOMICS	
13 PHYSICS		33 OCEANOGRAPHY			43 CHEMICAL			83 OTHER MEDICAL			23 HISTORY	
19 PHYSICAL SCIENCES, NEC*		39 ENVIRONMENTAL SCIENCES, NEC*			44 CIVIL			89 LIFE SCIENCES NEC*			24 LINGUISTICS	
MATHEMATICS		30 ENVIRONMENTAL SCIENCES, NEC*			45 ELECTRICAL			90 PSYCHOLOGICAL			25 POLITICAL SCIENCE	
21 ANY DISCIPLINE(S)		30 ENVIRONMENTAL SCIENCES, NEC*			46 MECHANICAL			91 BIOLOGICAL			26 SOCIOLOGY	
					47 METALLURGY AND MATERIALS			92 SOCIAL ASPECTS			29 SOCIAL SCIENCE NEC*	
					48 ENGINEERING, NEC*			99 PSYCHOLOGICAL, NEC*			OTHER SCIENCES**	
* Not Elsewhere Classified (For interdisciplinary projects and others not listed by discipline name) ** For interdisciplinary projects which cannot be classified within any of the preceding main fields.												
<b>PART II - PROCUREMENT DATA (To be completed by procurement office. See instructions on last page)</b>												
15. AGREEMENT NO. (Including prefixed letters)				16. MOD. NO.		17. AMOUNT OBLIGATED			18. COST SHARING PERCENTAGE			
19. TYPE OF ACTION BEING REPORTED (Circle one code number)												
1 NEW AWARD (New grant/contract; Co-op. agree.no.assigned)				2 ADDITIONAL FUNDS, SAME DURATION (Excludes incremental funding)				3 ADDITIONAL FUNDS AND TIME (Excludes incremental funding)				
4 NO-COST TIME EXTENSION				5 CHANGE IN PRINCIPAL INVESTIGATOR OR TECHNICAL OFFICER				6 INCREMENTAL FUNDING (Applies only to contracts conforming to PR 7.204-53)				
20. GRANT TITLE OR BRIEF DESCRIPTION OF TECHNICAL PURPOSE OF AGREEMENT (Required only for new awards)												
21. PROPOSAL RECEIVED			22. START DATE THIS ACTION			23. END (Completion) DATE			24. OBLIGATION (Last signature)			
a. MO	b. DAY	c. YR	a. MO	b. DAY	c. YR	a. MO	b. DAY	c. YR	a. MO	b. DAY	c. YR	
25. AD HOC DATA			26. VALIDATION BY RESPONSIBLE INDIVIDUAL: COMPLETED AND CHECKED.						27. SEQUENCE NO. (OUA use only)			
a	b	c	d	e	f	a. NAME			b. MO	c. DAY	d. YR	e. INSTALLATION
d	h	i	j	k	l							

Figure 3. repeated

NASA Form 1356

- Incremental funding of contracts, where an individual procurement request from an external source is not required

The NASA Form 1356 has three major divisions.

They are:

- Part I--Technical Data
  - University name
  - 1st, 2nd, 3rd principal investigator (employee of university doing work)
  - Main objective of work
  - Field of science or engineering
  - Medical school ID
  - Primary and alternate technical officer name; installation and mail codes (responsible NASA observer)
- Part II--Procurement Data
  - Grant/contract number
  - Modification number
  - Amount obligated
  - Cost-sharing percentage
  - Type of action
  - Grant/contract title or brief description
  - Proposal received date
  - Start date--this action
  - End (completion) date
  - Obligation date
  - Ad hoc data (reserved for future use)
- Validation
  - Signature of approving official (NASA)
  - Date
  - Procuring installation

A manual edit is performed by OUA on incoming forms to determine if the data is complete and correct. Defective forms are corrected on the basis of available information, from information obtained by telephone, or by sending the form back to the originator with a memo (Shown as

Figure 35) describing the difficulties. If the form is considered to be acceptable, the data is then entered on Transcript 2 for processing.

A manual edit is performed on each form to ensure the accuracy and completeness of the data. The required entries for each form are, for the most part, determined by the type of action (TOA) or purpose of the submittal which is indicated in block 19 of the form. The criteria for the manual edit are summarized in the chart (Figure 36) which specifies the data entries for each type of action (TOA).

When the manual edit has been performed and the data are accepted as accurate and complete, a sequential number is assigned to the form and entered in block 27 of the form. This identification number is input on the transcript and will appear on any error listings for the run. The appropriate Form 1356 can be easily located by the identification number and checked to determine the nature of the error.

b. Preparation of Transcript 2

Transcript 2 consists of four cards (numbered 56-59) or sets of data fields which are described below.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
WASHINGTON, D.C. 20546

REPLY TO  
ATTN OF: 1

MEMORANDUM

TO:

FROM: ADP Systems Supervisor, Office of University Affairs

SUBJECT: Inadequate/Erroneous Form 1356

The attached Form 1356 cannot be processed by OUA for the reason(s) checked:

- Block 1 - Institution is not uniquely identified.
- Block 2 - Must contain No., "unavail.", or "N.A."
- Block 3 - Principal Investigator name missing.
- Block 9 - Technical Officer name, install. or mail code missing.
- Block 15 - Missing or invalid Grant/Contract number.
- Block 16 - Modification No. missing.
- Block 17 - Amount obligated blank or requires verification.
- Block 18 - Cost Sharing percentage requires verification.
- Block 19 - Type of Action missing.
- Block 22 - Start date missing or requires verification.
- Block 23 - End date missing or requires verification.
- Block 24 - Obligation date missing or requires verification.
- Wrong Copy - See Form 1356 instruction 9.30.
- Other:

Please correct these errors and recheck the Form for any other items not completed in accordance with the instructions. Return the Form and this memorandum to Headquarters, Code P immediately. If you have any questions, contact me. Telephone ext. 50946.

D. Goodwin

Figure 35.



TYPE OF ACTION

BLOCK ON FORM	TOA=1	TOA=2	TOA=3	TOA=4	TOA=5	TOA=6	COMMENTS
Block 1 Univ. Name	X	X	X	X	X	X	Must be given
Block 3 Prin. Invest. Name	X	X	X		X		
Block 6 Tech. Officer	X	X	X	X	X		Spelling and initials must correspond to telephone book or other OUA entries.
Block 7 To Install. Name	X	X	X	X	X		
Block 8 To Mail Code	X	X	X	X	X		Only required if installation is headquarters.
Block 12 Medical School	X						"Yes" or "No" entry to indicate Medical School.
Block 13 Main Objective	X						If coded 02, project number prefix (block 15) should be NGT. If coded 03 or 06, project title (block 20) should reflect category. Caution: 06 is frequently misused for R&D.

Figure 36. Form 1356 Manual Edit Chart

TYPE OF ACTION

	TOA=1	TOA=2	TOA=3	TOA=4	TOA=5	TOA=6	COMMENTS
<u>BLOCK ON FORM</u>							
Block 14 CASE Field	X						Field Chosen should be logically reflected by project title.
Block 15 Contract Number	X	X	X	X	X	X	Number must be validly constructed.
Block 16 Amend. Number		X	X			X	
Block 17 Amt. Obligated	X	X	X			X	Verify if amount is over \$1 million.
Block 18 Cost-Sharing	X	X	X			X	Field must contain a zero or an amount. Verify percentages over 25.
Block 19 Type of Action	X	X	X	X	X	X	Only one code can be entered. IF TOA=1, verify that there is not an amendment number (block 16) and contract is not already on file.
Block 22 Start Date	X		X	X			Date must look reasonable.

Figure 36. Continued

TYPE OF ACTION

	TOA=1	TOA=2	TOA=3	TOA=4	TOA=5	TOA=6	COMMENTS
<u>BLOCK ON FORM</u>							
Block 23 End Date	X	X	X	X		X	End Date should look reasonable in view of other dates avail- able.
Block 24 Oblig. Date	X	X	X			X	

Figure 36. Continued

Card 56 must always accompany submission of data on any of the other three cards as it supplies the identification of the specific contract. A new contract would normally involve submission of all four cards. A change in the Principal Investigator or the Technical Officer can be input using cards 56 and 57 or Cards 56 and 58, respectively. An example of Transcript 2 is included as Figure 37.

Completion of each of the cards is described below.

Card 56 - General Contract Data

- Grant/Contract Number (Block 15)      Enter the contract number in columns 1-11. This number, assigned by Procurement, uniquely identifies each contract.
- OUA Code      The 8-character OUA Code which identifies the particular school is entered in columns 12-19.
- Case Objective (Block 13)      The two-digit code circled in block 13 of the form is entered in columns 20-21. This code only needs to be entered for new awards.
- Case Field Code (Block 14)      The two-digit field code circled in Block 14 is entered in columns 22-23 when submitting data for new awards.

CARD NO. 56 - GENERAL CONTRACT DATA

GRANT/CONTRACT NO.	OUA CODE	C.A.S.E. OBJECTIVE	C.A.S.E. ORDER NO.	PROPOSAL NUMBER	SPECIAL CODING RESERVED BLOCKS																										NASA FORM 1356 IDENTITY NO.	CARD ID
7332025037001111	64817	00-000-000-000	00-000-000-000	00-000-000-000	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																										BLANK	127456
NS6																																

CARD NO. 57 - PRINCIPAL INVESTIGATOR DATA

PRINCIPAL INVESTIGATOR	SECOND PRINCIPAL INVESTIGATOR	THIRD PRINCIPAL INVESTIGATOR	CARD ID
SURNAME: BLANK	SURNAME: BLANK	SURNAME: BLANK	NASA FORM 1356 IDENTITY NO.:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	127457

CARD NO. 58 - TECHNICAL OFFICER DATA

PRIMARY NASA TECHNICAL OFFICER	ALTERNATE NASA TECHNICAL OFFICER	CARD ID
SURNAME: BLANK	SURNAME: BLANK	NASA FORM 1356 IDENTITY NO.:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	127458

CARD NO. 59 - SPECIFIC ACTION DATA

MOD. NO.	AMOUNT OBLIGATED (Zero Lead)	COST SHARING	PROPOSAL RECEIVED DATE	START DATE THIS ACTION	END (Com. prior to this)	OBLIGATION DATE	NASA FORM 1356 RECEIVED DATE	CARD ID
AAA00054366700000480112376030177	1237703247710040577	ZERO LEAD	MM DD YY	MM DD YY	MM DD YY	MM DD YY	MM DD YY	127459
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60							

Figure 37.

- Medical Flag  
(Block 12)
- Proposal Number
- Special Coding Reserved  
Blocks
- 1356 Type  
(Block 19)
- NASA Form 1356 Identity Num-  
ber

- Card Identification

The pre-printed card ID in columns 79-80 will always be 56 for the data described above.

Card 57 - Principal Investigator Data

The data on this card are only required for new contracts or if there is a change in a principal investigator's name. This is determined by examining block 19 of the form which identifies the type of action being reported. Code "1" would indicate a new contract and code "5" would specify a change in a principle investigator's name. Any entries submitted for addition or updating must have the NASA Form 1356 identification number in columns 73-78. (A card 56 which specifies the contract must also accompany Card 57.)

- Initial 1  
(Block 3)

The first initial of the First Principal Investigator is entered in column 1.

- Initial 2  
(Block 3)

The 2nd initial of the First Principal Investigator is entered in column 2.

- Surname  
(Block 3)

The surnames of the 1st Principal Investigator is placed in columns 3-17, left justified.

- Initial 1 (Block 4) If there is a 2nd Principal Investigator, the 1st initial is entered in column 21.
- Initial 2 (Block 4) The 2nd initial is entered in column 22.
- Surname (Block 4) The surname is left-justified in columns 23-27.
- Initial 1 (Block 5) If there is a 3rd principal investigator, the 1st initial is entered in column 41.
- Initial 2 (Block 5) The second initial is entered in column 42.
- Surname (Block 5) The surname is left-justified in columns 43-57.
- NASA Form 1356 Identity Number (Block 27) The number assigned to the Form and written in block 27 is entered in columns 73-78.
- Card Identification The pre-printed card ID in columns 79-80 will always be 57 for the data fields described above.

Card 58 - Technical Officer Data

The data on this card are only required for new contracts or when the technical officer is changed. This is determined by examining block 19 which identifies the type of action being reported. Code "1" would indicate a new contract and Code "5" would specify a change in a Technical Officer's name. As with card 57, the NASA Form 1356 identification number must be entered in columns 73-78.



- Proposal Received Date  
(Block 21)
- Start Date This Action  
(Block 22)
- End (Completion) Date  
(Block 23)
- Obligation Date  
(Block 24)
- Procuring Installation  
(Block 26 e.)
- Received Date
- Identity Number

used to input either a dollar sign or percentage sign to specify how the cost sharing is reported.

The received date is the date entered in Block 21. This is written in the format MMDDYY in columns 21-26.

The start date for the action specified in the form is entered in columns 27-32 using the format MMDDYY.

The end date is entered in columns 33-38.

The date funds were obligated is entered in columns 39-44.

The installation code should be entered in columns 45-46. The unique installations codes can be obtained from URF Table 01.

This is the stamp-in date when the form is received in OUA and it should be entered in columns 47-52 using format MMDDYY.

The Form 1356 identification number assigned by OUA is entered in columns 73-78 with leading zeros as required.

- Card ID

The pre-printed card ID in columns 79-80 should always be 59 for the above data fields.

c. Output Reports Generated

Two major reports result from this option. They are both titled OUA Form 1356 edit error list, and are included as Figures 38 and 39. These reports consist of the input card image with the data element in error underlined. Fatal errors (indicating that the card is rejected) are underlined by X's; warning conditions are underlined by Y's. In some cases, the listing of the input card is accompanied by a written message. The messages that may appear are discussed below.

Message

Meaning

CARD 56 NOT FOUND

This message appears when the contract number is missing in columns 1-11. The contract number must be input for any transaction.

NO CARD 59, 1356  
TYPE IS 1

The type of action code was 1 for new award but Card 59 which is used to input the specific action data is missing.

OUA MANAGEMENT INFORMATION SYSTEM  
 OUA - FORM 1-356 EDIT-ERROR LIST

PAGE 1  
 BUZ30303

DATE 01/26/77						
NAS 1 14745036028101249						
XXXXXX						
NAS 2 9440006147001151						
XXXXXX						
NAS B 32353041050001051X						
XXXXXX						
NAS 8 32386001067001213						
XXXXXX						
NAS 9 1432204800900						
XXXXXX						
NAS 9 15212048054001131						
XXXXXX						
NCA 5 18024032001299						
XXXXXX						
NSG 5150025046001111 62960						
XXXXXX						
NSG 5152055050101131 64577						
XXXXXX						
NSG 5153008018001131 64848						
XXXXXX						
NSG 7503017101001251 64734						
XXXXXX						

TOTAL COUNTS FATAL 20 NONFATAL 0 TOTAL RECORDS 685

100049756	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100047356	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100050656	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100045056	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
300051056	OUA UNIVERSITY CODE INVALID
100051356	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100040056	OUA UNIVERSITY CODE INVALID
100048856	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100052656	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100048056	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID
100048356	GRANT/CONTRACT NOT ON CSF OUA UNIVERSITY CODE INVALID

Figure 38.

DATE	TIME	USER	REASON	RECORDS	NONFATAL	FATAL	TOTAL RECORDS	ACTION, OBL DATES IN VARIANCE START, CURRENT DATE IN VARIANCE						
***5***	10***	15***	20***	25***	35***	40***	45***	55***	60***	65***	70***	75***	80	
0600120000%	0000304000052776	10017809307911197610120376	YYYYYY	YYYYYY										00023859
1100115000%	00000100009207609017811307912037621120876	YYYYYY	YYYYYY											00024259
0800076609%	0000089008197609017808317910227610120376	YYYYYY	YYYYYY											00024659
MSG	121300801800	64762												00025456
MSG	121300801800	64762	HAHAMER	23										00025456
0300023070%	00000200011127612017611307711307623121676	YYYYYY	YYYYYY											00025458
1800013856%	0000155007287609017808317912017651120776	YYYYYY	YYYYYY											00025459
0700050000%	0000020007307609017808317912087623121676	YYYYYY	YYYYYY											00025559
0300031419%	000000500	110976110877	23121476											00025659
0300106000%	0000048008097611017810317911247610120876	YYYYYY	YYYYYY											00026259
TOTAL COUNTS					1	NONFATAL	14	TOTAL RECORDS	163					00027659

Figure 39.

Message

Meaning

1356 TYPE 6> or <1

The type of action code (column 72, card 56) was input as a value other than the acceptable range of 1 through 6. Correct and re-submit.

PROCURING INST.  
INVALID CARD 59

The installation code input on card 59 is not stored in Table 01 of the Ancillary Reference File. This is probably an input error; correct and resubmit.

CARD 59 NOT ALLOWED  
FOR TYPE 5

When the input transaction record ID is equal to spaces, but the 1356 type code is equal to 5.

Message

Meaning

OBL, RECEIVED DATES  
IN VARIANCE

The obligation date and  
the date the NASA Form  
1356 was received by OUA  
(card 59) are within  
three months of each  
other. Determine if in-  
put data are accurate; if  
not, correct by using file  
maintenance option c.

LAST 2 POS MOD NUM  
NOT NUMERIC

The last two digits of  
modification number  
were input as non-numeric.  
(The only alpha sequence  
that would be accepted is  
"AAA" which is used for  
new contracts in order to  
bypass this edit process.)

GRANT/CONTRACT  
NOT ON CSF

This message means that  
the contract number input  
does not exist in the Contract

Message

Meaning

Select File. Check the contract number; if it is correct, add the number to the CSF. Otherwise, correct the number and re-submit.

OUA UNIVERSITY CODE  
INVALID

This message appears when the input OUA Code (Card 56) does not match the Contract Data File OUA Code for that university. Correct and resubmit.

3. Option c. - Edit Corrections

a. Purpose

The edit correction option is used to maintenance contractual data in the OUA-MIS data base. As previously stated, Form 1356 data is initially entered using Run 3, Option b. Subsequent updating of contractual data in the Contract Data File (CDF), the AWCS Statistics File (ASF), the Policy Compliance File (PCF) and the Technical Description File (TDF) is accomplished by using Option c. and Transcripts 5-8.

Updating the files can be a continuous process during the monthly cycle. The need to update contractual data can occur as a result of error messages on reports generated after various run options, or as a result of missing data or inaccurate data obtained from FACS. The transcripts can be used to correct single data items by inputting the contract number and the field or fields to be corrected.

Transcript 5, basic contract maintenance is used to update the CDF. Transcripts 6A and 6B maintain the ASF, Transcript 7 is used for the TDF and Transcript 8 for the PCF.

Data used for updating the above files are compiled by OUA as a result of examination and evaluation of outside communications, internal OUA-MIS edit reports, and a number of other sources.

b. Preparation of Transcripts 5-8

Transcript 5 - Basic Contract Maintenance

This transcript, used to maintain the CDF, is illustrated as Figure 40. Some of the data elements on this transcript are maintained primarily by data from the FACS System. They appear on this form as a matter of good programming practice.





These data elements should not be maintained by OUA. They are listed below:

- CIC code
- PPC code
- Name English
- FACS contract status
- Method of authorization
- Congressional District
- Kind of action
- Estimated cost or price
- OAST relevance code
- Current year RTOP

Transcript Number 5 provides four input card images. Data fields for each card images are discussed below.

Basic Contract Data Card Number 81

LABEL

COMMENT

Grant/Contract No.

The contract number must be entered in columns 1-11. Project identification must exist on CSF, or a fatal error will occur.

OUA Code

The OUA code, which uniquely identifies the University associated with project is input in columns 12-19. It must be numeric or a warning message will occur.

CASE Objective	The CASE Objective numeric code is entered in Columns 20-21. The code must exist on Table 02 of the Ancillary Reference File (ARF) or a warning message will occur.
CASE Field	The CASE field code is input in Columns 22-23. The code must exist on Table 03 of ARF or a warning message will occur.
Medical Field	If the school is a medical school, an "X" is placed in Column 24; otherwise, it is left blank.
CIC Code	The Contractor Identification Code (from FACS) is entered in Columns 25-31. No editing is performed.
PPC	Columns 32-33 are labelled for the Procurement Placement Code. This code is automatically extracted from FACS.
Name English	Columns 34-53 shows the contractor name. This data field is automatically extracted from FACS.
Status - FACS	The one-digit numeric FACS code, indicating the status of the contract (Column 54) is automatically extracted from FACS.
Status - OUA	The OUA status code can be entered in Column 55.
MOA	The method of authorization flag is not used at present, but the capability for future use is available. This flag would be extracted from FACS.
Extent Competition	The one-digit numeric procurement code (1-6), which specifies the degree and type of competition (Column 57) is extracted from FACS.

Type-of-Effort

If a contract is obtained from FACS which meets the selection criteria but is not of interest to OUA, a type-of-effort flag for training can be input by placing an "X" in Column 58. This will prevent the contract data from being retrieved and used in generated reports. (Such training contracts can be deleted from the system the next time Run 1 is requested.)

Security Classification

The security classification field, Column 59, can be U, C, S, T, or blank. This field is not in current use.

Exclude Flag

Contract data which are not desired for report processing, can be excluded by entering a one-digit code in Column 60 as follows:

<u>CODE</u>	<u>CATEGORY</u>
1	(See Note)
2	Purchase Orders (Contracts prefixed by WO, PL, CC, A, W, E, H, S, L, C, T or P.)
3	Disputed Schools
4	Disputed Projects
5	Others

FFRDC

Federally Funded Research and Development Centers are defined by placing an "X" in Column 61. This allows for data retrieval on contracts with FFRDCS.

Action Code

The action code entered in Column 78 must be C for change.

Card ID

The pre-printed card ID in Columns 79-80 will always be 81.

NOTE: To "turn off" an exclude flag enter code 1, rather than blanking the field. (All valid contracts actually carry a system-generated code 1 in this field.)

CARD 82 - BASIC CONTRACT DATE (PART II)

Contract Number	The identifying contract number must be present in Columns 1-11.
Congressional District	A two-digit numeric code for the Congressional District is entered in Columns 12-13. (Code changes are normally made to the University Reference File, Run 3, Option a.)
Contract Start Date	The numeric date, entered in Columns 14-19 must not be less than 1959 and not more than three years past the current date. Any date outside those boundaries will cause a warning message to appear.
Contract End Date	The same criteria apply as for the start date. This date is entered in Columns 20-25.
Accounting Installation	The two-digit installation code is entered in Columns 26-27. The code must exist in Table 01 of the Ancillary Reference File and the Use Flag cannot be N, P or T, otherwise, a warning message will occur.
Procuring Installation	This code is input using Columns 28-29. The code must be in Table 01 and the use flag cannot be N or T, or a warning message will occur.
Kind of Action	The numeric kind of action code (Columns 30-31) is extracted from FACS. These codes identify in general terms, the kinds of procurements and the action taken to initiate the procurement or modifications.
Estimated Cost	The estimated cost or price (Columns 32-39) is extracted from FACS.

Step Funding	An arbitrary alpha or numeric code indicating the status of step-funded grants. Currently, no codes have been defined or assigned and this data field is reserved for future use.
Future Funding	A two-digit code can be input in Columns 41-42, to indicate contract renewal plans. "NN" means project will not be renewed. This field is not in full use as codes have not been defined.
Future Funding Entry Date	A date in the format, MMY, can be input using columns 43-46. The date should not be three years greater than the current date.
Pass Thru Date	Date OUA becomes aware that renewal funding action has been initiated, and can be entered in Columns 47-52, using format MMDDYY. This field is reserved for future date.
Alpha Code	The seven-digit code which uniquely identifies the contractor, (Columns 53-59) is extracted from FACS.
OAST Relevance Code	This two-digit code, defined in FACS, is automatically extracted.
Current Year RTOP	This field is not currently used; reserved for possible future use.
Action Code	The action code in Column 78 must be input as "C" for change.
Card ID	The preprinted card ID will always be 82 for the above data items.

CARD 83 - TECHNICAL OFFICER DATA

Contract Number            The contract number must be input, using Columns 1-11.

Preliminary Technical Officer (PTO)    The first and second initial followed by the surname, is entered in Columns 12-28. (Can update using this transcript or by using Transcript 2, card 57, when submitting Form 1356 data.)

Installation                The two-digit installation code for the PTO location is entered in Columns 29-30. The code must be contained in Table 01 of the Ancillary Reference File and the use flag for the installation cannot be P or N. Otherwise, a warning message will occur.

Mail Code                    The mail code for the PTO is input using Columns 31-41.

Alternative Technical Officer (ATO)    The name is entered in the same manner as the PTO using Columns 42-58.

Installation                The code is input using Columns 59-60.

Mail Code                    Entered in Columns 61-71.

Action Code                  The action code, entered in Column 78, must be "C" for change.

Card ID                      The preprinted card ID in Columns 79-80 will always be 83 for the above data items.

CARD 84 - PRINCIPLE INVESTIGATOR NAMES DATA

Contract Number            The contract number must be entered, using Columns 1-11.

Principle Investigator        The first and second initial followed by the surname, is entered in Columns 12-28. If the name of a principle investigator is changed, the new name can be input using Tran-

script 5 or on Transcript 2,  
card 58, when submitting Form  
1356 data.

Second Principle  
Investigator

The name is entered, as above,  
using Columns 29-45.

Third Principle  
Investigator

The name is entered, as above,  
using Columns 46-62.

Action Code

The action code, entered in Col-  
umn 78, must be "C" for change.

Card ID

The preprinted card ID in Columns  
79-80 will always be 84, for the  
above data items.



## Transcript 6 - Individual AWCS Entry

Transcript 6 consists of two parts, 6A and 6B. These two sections are used to maintain the AWCS Statistics File (ASF) which contains the funding information within the OUA-MIS. An example of this transcript is shown as Figure 41. The transcript is available for entering total data on a new contract (rarely occurs) or for maintaining existing contractual data. Maintenance could involve any of the data elements in the ASF except the FACS CFY obligation figures which are inaccessible for updating by OUA.

Updating data fields in the ASF would be required when, for example, manual negative adjustments must be made to FACS figures which were not automatically adjusted in Run 4. (See pages 129 - 138 for a discussion of negative adjustments.) In addition, it may occasionally be necessary to change the assignment of funding figures from one COG office account to another. This is normally done when facility projects are assigned arbitrary COG office codes which do not relate to the actual office having responsibility for the projects. The existing record, obtained from FACS, is deleted and the new record, with the accurate COG office code, is added. There may also be occasions when



FACS funding figures for a particular contract are inaccurately input and require correction, or figures are missing and need to be input to complete the data record.

The use of Transcripts 6A and 6B for maintenance should be regarded as a temporary measure as each month the ASF is newly created during the update from FACS. Any updating of funding statistics performed by OUA during the previous month will no longer exist in the ASF.

Transcript 6A - Individual AWCS Entry - Part I

The completion of each item on the transcript given below:

- Contract Number                      The contract number must be entered for any update transaction, using Columns 1-11. The contract number must exist on the Contract Select File or a fatal error will occur.
  
- Accounting Installation              The two-digit accounting installation code must be entered in columns 12-13 or a fatal error will occur. In addition, the code must be contained in Table 01 of the Ancillary Reference File (ARF) and if the use flag is N, P or T, a warning message will occur.

- **Cog Office**

The three-digit COG office code must be input using columns 14-16. A blank or "\*" will result in a fatal error message. In addition, the code must be contained in Table 08 of the ARF or a warning message will occur.
- **AWCS Number**

The AWCS number is also required input, using columns 17-23. The number must consist of seven numerics, (unique project number) or four numerics, followed by three blanks (facility project number). If these conditions are not met, a fatal error message will occur.
- **CFY Obligations**

Columns 24-35 are used to update or input OUA CFY obligation figures. Figures are right-justified with leading zeros when required. A "-" or "+" is entered in column 24; if left blank, it will default to "+".
- **CUM Obligations**

Columns 36-47 allow for input of cumulative obligation figures. These would normally not be entered except when inputting total data on new contracts or in reassigning funding from one Cog office to another. Cumulative figures are normally algebraically computed by the system and automatically generated.

- CFY Disbursements                      Figures can be input using columns 48-59.
- CUM Disbursements                      Columns 60-71 can be used to input cumulative disbursement figures.
- Action Code                              The action code, entered in column 78 can be A for add, C for change or D for delete.
- Card ID                                    The preprinted card ID in columns 79-80 will always be 85 for the above data items.

Transcript 6B - Individual AWCS Entry - Part II

Transcript 6B is needed for additions of or changes to COG offices associated with contract funding statistics. The data input includes the descriptive English associated with a particular unique project number or a facility project number.

This English is needed for report production and must be input by OUA when changes are made in the ASF as normally this English is brought in from FACS. There is no look-up table to supply the English within OUA-MIS. The data entries for this transcript are completed as discussed below:

- Entry Identifier                              Columns 1-23 are completed in exactly the same way as Transcript 6A, i.e., the contract number, accounting installation code, COG office code and AWCS number.

- UPN/FPN Description                   The descriptive English associated with each unique project number or facility project in the Agency Wide Coding Structure (AWCS) is entered, left-justified, in columns 24-59.
  
- Update Date                            The current date can be input using the format MM DD YY in columns 61-66.
  
- Action Code                            The action code, entered in Column 78, must be A for add or C for change.
  
- Card ID                                The preprinted Card ID in columns 79-80 will always be 86 for the above data items.

Preparation of Transcript 7

This transcript (Figure 42) is used to maintain the Technical Description File (TDF) which contains a technical description for each project. The English is originally obtained from FACS during the Run-2 update. OUA then has the opportunity, during Run 3, to correct or improve the English text which will appear in reports generated during Run 7. It is possible to blank out FACS English for a particular contract by placing asterisks in the first position (Column 14) of each line of text. New English could then be input at a later point (but prior to report generation). This might be

OUA-MIS TRANSCRIPT NO. 7 - TECHNICAL DESCRIPTION OF CONTRACT CORRECTION ENTRY

FILE NO. 100-100000

DATE 4/27

PAGE 1 OF PAGES

NOTE: Asterisk (\*) in first position of a field blanks entire field.

ACTION CODES: C

ACTION CODE (CC-78) C

CARD NO. (CC-70-00) 87

TECHNICAL ENGLISH (CC-1-63, L-94 Insects)

SEGMENT NO. (CC-1-73) 01

GRANT CONTRACT (CC-1-77)	SUFFIX (CC-6-77)	1	2	3	4	5	6	7	8	9	10
NAS	5	2	4	0	9	4					
NAS	W	3	0	2	0						
NAS	W	3	0	2	0						
NSG		7	3	3	2						
NSG		7	3	3	2						

COMPILATION OF GLOBAL TECTONIC MAPS  
 SYMPOSIUM ON AERONAUTICS AND SPACE AIMED AT  
 MOTIVATING MINORITIES AND WOMEN TOWARD  
 SCIENCE  
 PLANETARY SPECKLE IMAGING  
 \*

Figure 42.

necessary when the English is very confusing and requires further clarification before improvements can be made.

The transcript data fields are described below.

A maximum of four 50-character lines can be entered for each project.

- Contract Number  
The contract number must be entered, using columns 1-11. The number must be on the Contract Select File or a fatal error will occur.
- Segment Number  
Each line of text for a record must have a sequential number assigned (01-04) which is entered in columns 11-13.
- Textual English  
The English is left-justified in columns 14-63. Up to four lines can be entered for each contract. (Data base accepts 10 lines from FACS but OUA can access only four lines.)
- Action Code  
The action code entered in column 78 can only be C for change.
- Card ID  
The preprinted card ID in columns 79-80 will always be 87 for the above data items.



Preparation of Transcript 8 - Individual Contract  
Amendment Update Entry

This transcript is used to maintain the Policy Compliance File (PCF) which contains contract data obtained from Form 1356 submittals. There may be multiple records for each contract as a result of modifications or amendments to the contract; these are distinguished by a unique modification number.

New Form 1356 data originally entered using transcript 2, are maintained by use of transcript 8. An example of transcript 8 is shown as Figure 43, and the completion of the data fields on the transcript is described below.

- **Contract Number**                      The contract number must be entered, using columns 1-11. The number must be contained in the Contract Select File or a fatal error will occur.
  
- **Modification Number**                The unique modification number which represents a specific change to a contract is entered in columns 12-14. (The number is supplied by the procurement office and entered in block 16 of Form 1356). The first digit of the number may be an alpha character; normally, however, there are only two numeric digits.

OUA - MIS TRANSCRIPT NO. 8 CARD 88 - INDIVIDUAL CONTRACT AMENDMENT UPDATE ENTRY

ITEM	PROJECT NO.			MOD. NO.			FACS FLAG			FACS DATA			ACTION START DATE			ACTION END DATE			WHOLE DOLLARS OBLIGATED			OBLIG. DATE			COST SHARING			NASA FORM 1356 RECEIVED DATE			PROPOSAL RECEIVED DATE			ACTION CODE			CARD ID																																					
	PREFIX	SUFFIX	A	THRU	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43		44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	INGR	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		
2	MAS	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
3	MAS	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
4	INGR	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		

NOTES:

Figure 43.

The modification code must be input as "AAA" for initial entry of new contract data.

- FACS Flag
- 1356 Flag
- FACS Data

These fields are no longer used.

- 1356 Type

Column 25 must contain a numeric code indicating the type of action being reported. (The type code is shown on Form 1356, block 19.)

- Procuring Installation

The installation code is entered in columns 26-27. The code must be contained in Table 01 of the Ancillary Reference File and the use flag associated with the installation cannot be N or T; otherwise, a warning message will occur.

- Action Start Date

The date when the type of action is effective is entered in columns 28-33 in the format MMDDYY. The month and day are editing for acceptable numbers, i.e., 1-12 and 1-31 respectively.

- Action End Date

The end date is entered in columns 34-39. The same rules apply as for the start date.

- Whole Dollars Obligated

The amount of obligated funds is right-justified in columns 40-47 with leading zeros, when required.

- **Obligation Date**  
The date of the obligation (shown in Block 24 of Form 1356) is entered in columns 48-53, using the format MMDDYY.
- **Cost Sharing**  
The amount of money above and beyond a NASA obligation which is contributed to a project is the cost sharing amount. This is input in columns 55-62 as a percentage (to 2 decimal places) or as an even dollar money amount. Column 54 requires input of either a percentage sign, %, or a dollar sign, \$, to indicate the type of cost sharing entry.
- **NASA Form 1356 Received Date**  
The date the form was received by OUA is entered in columns 63-68.
- **Proposal Received**  
The date the proposal was received by NASA (Block 21 of Form 1356) is input using columns 69-74.
- **Headquarters Mail Code or Installation Code**  
A two-digit Headquarters office mail code or the installation code is entered in columns 75-76.
- **Action Code**  
The action code entered in column 78 should be C for change or D for delete (adds must be made with Transcript number 2) or a fatal error will occur.

FILE-MAINTENANCE-DATA EDIT REPORT

BUZ30405

\*\*\*\*5\*\*\*10\*\*\*15\*\*\*20\*\*\*25\*\*\*30\*\*\*35\*\*\*40\*\*\*45\*\*\*50\*\*\*55\*\*\*60\*\*\*65\*\*\*70\*\*\*75\*\*\*80 \*\*\* ERROR DESCRIPTION \*\*\*

62	83	INVALID ACTION CODE
NAS 5 2373BJUMUELLER	83 X	INVALID ACTION CODE
NAS 5 2374BWBHIBBARD	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NAS 5 23791TBHAYES	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NAS 5 23791RAHOFFMAN	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NAS 5 23804RAHOFFMAN	84 X	INVALID ACTION CODE
NAS 5 238910IDATA ANALYSIS AND COMPUTER MAPPING	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NAS 5 238910IDATA ANALYSIS AND COMPUTER MAPPING	C87	G/C NUMBER NOT ON CSF
NAS 8 32263W SNODDY	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NASW 2936RGBIVINS	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NASW 2992C HARGRAVES	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NCA 2 35702JBPOLLACK	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NCA 8 125B SHACKELFORD	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NCA 8 127L HASTINGS	C83	NON-FATAL ERROR IN ONE OR MORE FIELDS
NSG- 13870IGROWTH, PERFECTION, AND CHARACTERIZATION OF	C87	G/C NUMBER NOT ON CSF
NSG 138702TRIGLYCINE SULFATE: A MODEL FOR ZERO GRAVITY	C87	G/C NUMBER NOT ON CSF
NSG 138703GROWTH	C87	G/C NUMBER NOT ON CSF
****5***10***15***20***25***30***35***40***45***50***55***60***65***70***75***80 *** ERROR DESCRIPTION ***		

Figure 44.

OPTION 3: FORMS 1356 DATA

GRANT/CONTR NUMBER	OUA CODE OLD	OUA CODE NEW	CASEO O N	CASEF O N	MED O N	TO1IN O N	TO2IN O N	START DATE		END DATE		PROCI O N	ACTION TYPE
								F	OLD	F	NEW		
NSG 1382	05103700		*11	*47		23	2000000*020177	2000000	013178	2000000	013178	23	CHANGE
NSG 2003	00614150		11	39		21 21	011574	2033177	093077	2033177	093077	21 21	CHANGE
NSG 2170	02905300		11	41		21 21	070176	2013177	123177	2013177	123177	21 21	CHANGE
NSG 2200	00613576		*11	*12		21	2000000*010177	2000000	123177	2000000	123177	21	CHANGE
NSG 2203	00513800		*11	*41		21	2000000*020177	2000000	103177	2000000	103177	21	CHANGE
NSG 2206	02605600		*12	*41		21	2000000*020177	2000000	073177	2000000	073177	21	CHANGE
NSG 3002	04211100		12	12		22 22	021574	2033077	093077	2033077	093077	22 22	CHANGE
NSG 3096	01203150		12	45		22 22	020276	2020277	050277	2020277	050277	22 22	CHANGE
NSG 3135	01802790		*12	*41		22	2000000*011577	2000000	011478	2000000	011478	22	CHANGE
NSG 5049	01710630		11	19		51 51	020175	2013177	093077	2013177	093077	51 51	CHANGE
NSG 5053	05102700		11	19		51 51	021775	2031577	053177	2031577	053177	51 51	CHANGE
NSG 5060	03603100		11	32		51 51	040175	2033177	033178	2033177	033178	51 51	CHANGE
NSG 5063	03402500		11	49		51 51	040175	2033177	113077	2033177	113077	51 51	CHANGE
NSG 5066	01100400		11	13		51 51	050175	2043077	043077	2043077	043077	51 51	CHANGE
NSG 5074	02401800		12	11		51 51	100175	2033177	033178	2033177	033178	51 51	CHANGE
NSG 5112	02403200		11	19		51 51	050176	2043077	083177	2043077	083177	51 51	CHANGE
NSG 5135	00801900		11	11		51 51	111576					51	CHANGE
NSG 5150	02504600		*11	*11		51	2000000*010177	2000000	123177	2000000	123177	51	CHANGE
NSG 5152	05505010		*11	*31		51	2000000*010177	2000000	123179	2000000	123179	51	CHANGE
NSG 5153	00801800		*11	*31		51	2000000*011777	2000000	011678	2000000	011678	51	CHANGE
NSG 5159	01500400		*11	*31		51	2000000*021477	2000000	021378	2000000	021378	51	CHANGE
NSG 6008	04809100		11	19		53 53	120175	2113076	033177	2113076	033177	53 53	CHANGE
NSG 6011	04211100		11	19		53 53	100175	2093076	093077	2093076	093077	53 53	CHANGE

Figure 45.

12/23/76

QUA MANAGEMENT INFORMATION SYSTEM  
AWCS (ASF) UPDATE REPORT

PAGE 1  
BUZ32303

G/C	AI	COG	AWCS	FACS-CFY-OBS	QUA-CFY-OBS	FACS-CUM-OBS	CFY-DIS	CUMULATIVE-DIS	UPDATE	MESSAGE TEXT
NAS 5 1925	51	200	9685-00-00	0	0	70000	0	0	0	FM*DELE
NAS 5 1925	51	300	3052-00-00	0	0	18000	0	0	0	FM*DELE
NAS 5 1925	51	500	3052-00-00	0	0	18000	0	0	0	*FM ADD
NAS 5 1925	51	500	9685-00-00	0	0	70000	0	0	0	*FM ADD

Figure 46.

TDF UPDATE PROCESSING REPORT

DESCRIPTION RECORD IMAGE	ACTION/CAUSE
***5***10***15***20***25***30***35***40***45***50***55***60***65***70***75***80	
NAS 3 2036501SPACE BROADCAST COMMUNICATIONS TECHNOLOGY VALUE	C87 ADDED TO TDF
NAS 3 2036502ASSESSMENT METHODOLOGY STUDY	C87 ADDED TO TDF
NAS 5 2290301CALIBRATION OF MAGNETIC ELECTRON MULTIPLIER	C87 TDF ALTERED OLD/NEW
NAS 5 2290301CALIBRATION OF MAGNETIC ELECTRON MULTIPLIERS	C87
NAS 5 2290801NIMBUS-G EXPERIMENT TEAM FOR SOLAR BACKSCATTERED	C87 TDF ALTERED OLD/NEW
NAS 5 2290801NIMBUS-G EXPERIMENT TEAM FOR SOLAR BACK-SCATTERED	C87
NAS 5 2290802ULTRAVIOLET AND TOTAL OZONE MAPPING SYSTEM	C87 TDF ALTERED OLD/NEW
NAS 5 2290802ULTRAVIOLET AND TOTAL OZONE MAPPING SYSTEM	C87
NAS 5 2365801EXTREME ULTRAVIOLET AND SOFT X-RAY SCIENCE STUDY	C87 ADDED TO TDF.
NSG 131201OPTIMAL DESIGN METHODS FOR MULTIVARIABLE	C87 ADDED TO TDF
NSG 131202SAMPLED-DATA DIGITAL CONTROL SYSTEMS	C87 ADDED TO TDF
NSG 131901AN EVALUATION OF POTENTIAL SPACE SHUTTLE	C87 ADDED TO TDF
NSG 131902EXPERIMENTS ON PHYSICO-CHEMICAL INSTABILITIES	C87 ADDED TO TDF
NSG 216501SIMULATION OF HOT-SURFACE IGNITION OF FLAMMABLE	C87 ADDED TO TDF
NSG 216502LIQUIDS AND RELATIVE EFFECTIVENESS OF NACELLE	C87 ADDED TO TDF
NSG 216503FIRE KNOCKDOWN AND SUPPRESSION FOR FLOW MACH	C87 ADDED TO TDF
NSG 216504NUMBERS BETWEEN ZERO AND 0.1	C87 ADDED TO TDF
NSG 217001BENEFIT-COST EVALUATION OF AN INTRA-REGIONAL AIR	C87 ADDED TO TDF
NSG 217002SERVICE IN THE BAY AREA	C87 ADDED TO TDF
NSG 311701BOUNDARY LAYER FLOW TRANSITION AND SEPARATION	C87 ADDED TO TDF
NSG 311702IN INLETS OF V/STOL AND OTHER HIGH PERFORMANCE	C87 ADDED TO TDF
NSG 311703PROPULSION SYSTEM	C87 ADDED TO TDF
NSG 600901STUDY OF NEUTRAL COMPOSITION OF UPPER ATMOSPHERE	C87 TDF ALTERED OLD/NEW
NSG 600901STUDY OF NEUTRAL COMPOSITION OF UPPER ATMOSPHERE	C87
NSG 600902WITH ROCKET-BORNE MASS SPECTROMETERS	C87 TDF ALTERED OLD/NEW
NSG 600902WITH ROCKET-BORNE MASS SPECTROMETERS	C87
NSG 601101STUDIES OF THE PHYSICS AND CHEMISTRY OF THE	C87 TDF ALTERED OLD/NEW
NSG 601101STUDIES OF THE PHYSICS AND CHEMISTRY OF THE	C87
NSG 601102TERRESTRIAL ATMOSPHERE	C87 TDF ALTERED OLD/NEW
NSG 601102TERRESTRIAL ATMOSPHERE	C87
NSG 725701FRACTURE THEORY FOR PLASTICS	C87 ADDED TO TDF

\*\*\* RECORD COUNTS \*\*\*  
 OLD-TDF-FILE = 24346  
 NEW-TDF-FILE = 24363  
 ADD-FILE COUNT = 0  
 CHANGE-DELETE = 24  
 DELETE-SET = 0

\*\*\*5\*\*\*10\*\*\*15\*\*\*20\*\*\*25\*\*\*30\*\*\*35\*\*\*40\*\*\*45\*\*\*50\*\*\*55\*\*\*60\*\*\*65\*\*\*70\*\*\*75\*\*\*80

Figure 47.



03/10/77

O U A M A N A G E M E N T I N F O R M A T I O N S Y S T E M

PAGE 1

O U A M I S P O L I C Y C O M P L A I N C E U P D A T E E R R O R R E P O R T

BUZ32103

OPTION 5: FORM 1356 AND F.M. MERGED INPUT

***5**10**15**20**25**30**35**40**45**50**55**60**65**70**75**80**85**90**95**100**105**110	EXPLANATION TEXT
NAS 5 20705 05 X000000	OLD PCF
NAS 5 20705 05 X000000	1356 CHG
NAS 5 20974 05 X000000	OLD PCF
NAS 5 20974 05 X000000	1356 CHG
NAS 5 21980 03 X000000	OLD PCF
NAS 5 21980 03 X000000	1356 CHG
NAS 5 22392 02 X000000	OLD PCF
NAS 5 22392 02 X000000	1356 CHG
NAS 5 22409 11 X000000	OLD PCF
NAS 5 22409 11 X000000	1356 CHG
NAS 5 22495 08 X000000	OLD PCF
NAS 5 22495 08 X000000	1356 CHG
NAS 5 22537 03 X000000	OLD PCF
NAS 5 22537 03 X000000	1356 CHG
NAS 5 22816 02 X000000	OLD PCF
NAS 5 22816 02 X000000	1356 CHG
NAS 5 22875 02 X000000	OLD PCF
NAS 5 22875 02 X000000	1356 CHG
NAS 5 22987 03 X000000	OLD PCF
NAS 5 22987 03 X000000	1356 CHG
NAS 5 23557 02 X000000	OLD PCF
NAS 5 23557 02 X000000	1356 CHG
NAS 5 23611 03 X000000	OLD PCF
NAS 5 23611 03 X000000	1356 CHG
NAS 5 23706 02 X000000	OLD PCF
NAS 5 23706 02 X000000	1356 CHG
NAS 5 23809 X000000	FM CHG
NAS 5 23809 X000000	FM CHG
***5**10**15**20**25**30**35**40**45**50**55**60**65**70**75**80**85**90**95**100**105**110	EXPLANATION TEXT

Figure 48.

RECORD TO BE DE-  
LETE CANNOT BE  
FOUND ON ASF

The contract for which a delete trans-  
action was submitted is not currently  
on the ASF. Check for validity of  
contract number; correct and resubmit.

DUPLICATE CARD 85  
OR 86 CARD IGNORED

Two input cards submitted for the same  
contract. One set is ignored. No  
action is necessary.

INVALID ADD - CARD  
86 ONLY

Card 86 was the only input card sub-  
mitted for an add transaction. A card  
85 must accompany card 86. Resubmit.

CONTRACT NUMBER  
NOT ON CDF (OR  
CH/DEL SEQ. NOT  
ON TDF FILE, IGNORED

The contract for which an update trans-  
action was submitted is not currently  
on the file. Check for validity of  
contract number; correct and resubmit  
if invalid.

INVALID KEY CON-  
DITION DETECTED ON  
AN ISAM WRITE OF  
CONTRACT NUMBER

This message indicates a serious system  
malfunction and programmer assistance  
should be sought immediately.

## DATA BASE INTEGRATION AND ANALYSES - MONTHLY END GAME

The monthly end game is so named because it is a series of "moves" which, as a whole, permit achievement of system objectives for the month. In this case the objective is creation of valid files from which the desired periodic output reports can be written. In effect, the end game is the capstone to all of the previous update, correction and file maintenance efforts performed earlier during runs 1-4. The conceptual contrast between runs 1-4 and 5 is important. The former runs allow for edit, examination and correction of new material as it is added to the system. Run 5, however, is a complete analysis of data in the system regardless of when or how it was input. If this monthly, complete check of critical data elements is satisfactory, then a second step in run 5 validates the files. Once files for a particular month are so validated, output reports may be made from them immediately or anytime in the future. Alternately, if run 5 indicates an unacceptable number of errors in the data base, corrections are made by going back to run 3, then proceeding once again to run 5.

With proper input management during the month, a single run 5 is frequently all that is required, although two run 5's are often used to give better accuracy. More than two run 5's generally result from problems associated with

ADP programs, JCL changes, equipment failure, or extensive modifications in the way FACS data is collected and entered by the financial management or procurement people. Additional runs are also common at the end of the fiscal year as the resultant reports have the widest use and must reflect the highest obtainable accuracy.

Run 5 will be discussed in two sections. In the first part, run 5a, all of the system data are subjected to a critical review for accuracy. Run 5b, validates and integrates the files, making them available for immediate and future use.

A. Run 5a--Data Error Analysis

The data base analysis report consists of four separate sections, to reflect groupings of similar error types for convenience in presentation.

1. CDF Integration Analysis

This report interrogates the data base for four types of conditions:

- Changes: This type of message indicates that data pertinent to a contract in this month's incoming FACS file is different from that in the previous month's FACS file. Change messages do not necessarily mean an error has occurred; however, they highlight circumstances which should be investigated. Change messages appear only on the first run 5a in any month.

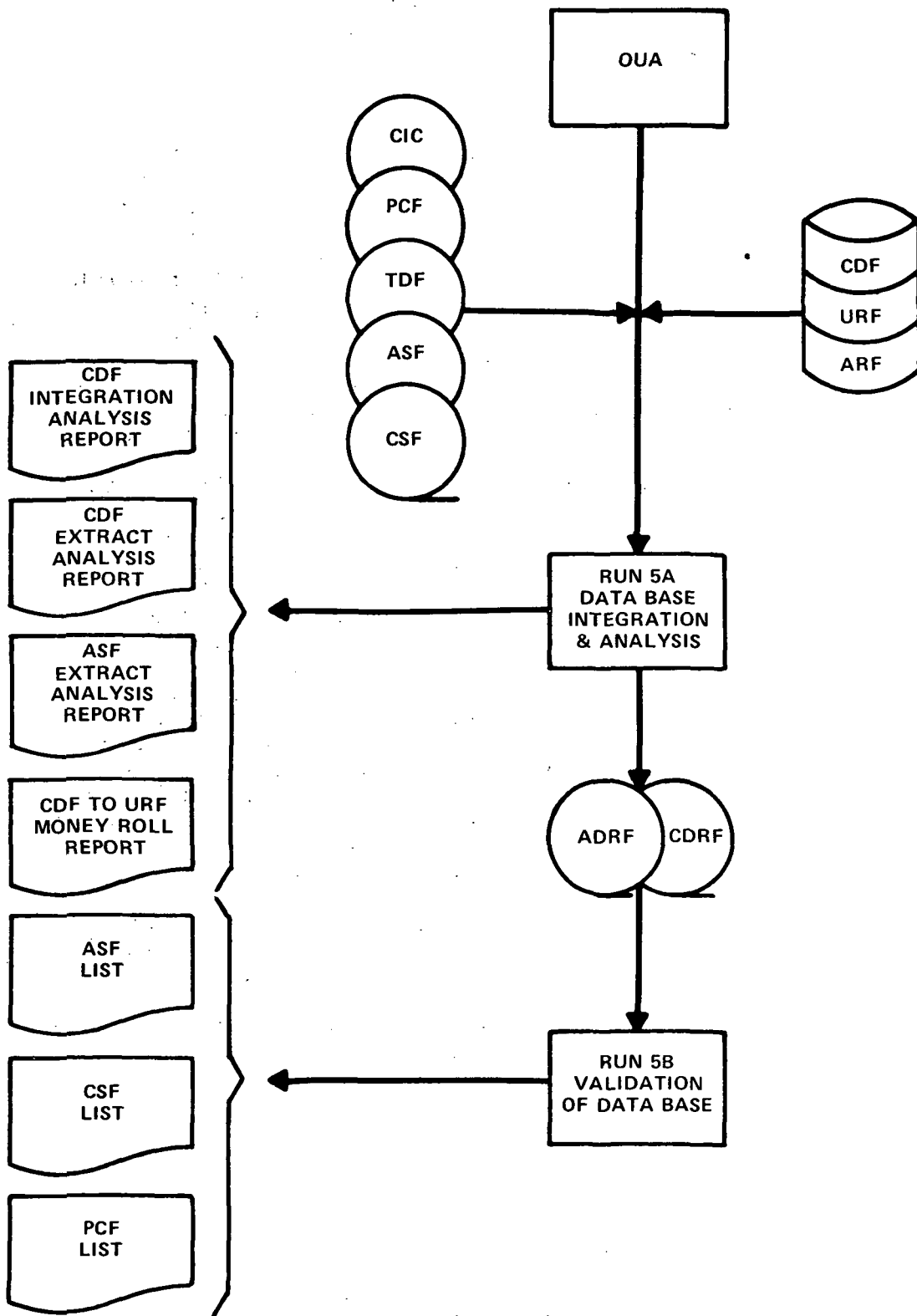


Figure 49. RUNS 5A AND 5B FLOW CHART  
(Data Base, Integration, Analysis and  
Validation)

Change Messages

Action

CHANGED ALPHA CODE

Make sure that the contract is attributed to the correct university, and the alpha and OUA codes on the URF are correct. This message can also result from recent modifications to the FACS CIC file or the URF of which the OUA system operator is aware or has initiated.

INVALID CIC CODE ON  
CDF RECORD

Same as above. Rarely seen. Serves as backup check in case the above edit fails.

CHANGED CONGRESSIONAL  
DISTRICT

Make sure Congressional District on URF is correct. This message on a single contract from a school generally means that FACS is attributing the work to an off-campus place-of-performance, rather than to the campus location used by OUA on the URF. If, however, a large number of changes affect contracts from the same school, re-districting has probably occurred and the Congressional District on the URF must be changed. Verify the new Congressional District with the Office of Legislative Affairs; the new FACS-based Congressional District shown in this report may not reflect the URF address for the school.

● Wrong Data Messages

Action

NON CIC CODE ON CDF  
RECORD

This is merely a warning that FACS may be having identification problems with an organization. It frequently occurs when OUA adds a contract to the CSF before the contract has been reported in FACS.

DATES REVERSED OR  
BLANK

The start or end date is missing or the end date is earlier than the start date. Run 3 file maintenance to the CDF is needed.

CUMULATIVE OBLIGATIONS ARE LESS THAN  
CUMULATIVE DISBURSEMENTS

Only errors greater than \$100 are reported. Financial Management should be notified. No OUA action is required unless these errors are large enough to have a significant impact on OUA reports. In that case run 3 AWCS file maintenance is indicated.

NEGATIVE CUMULATIVE  
OBLIGATIONS

Same as above. Also note that this condition is frequently associated with "bad" contracts which should be excluded from the OUA-MIS on other grounds.

NEGATIVE CUMULATIVE  
DISBURSEMENTS

Same as above.

Certain data conditions are unusual and therefore should be examined to determine if they actually represent errors.

● Suspicious Events  
Message

Action

END DATE MORE THAN  
FIVE YEARS AHEAD OF  
REPORT DATE

Few contracts run for such a long time period. Date may be wrong, requiring run 3 file maintenance.

ACTIVE CONTRACT END  
DATE SUSPICIOUS

A contract with an active (status code = 1) OUA code has an end date more than a year earlier than the report date. Correct with run 3 file maintenance if wrong.

Figure 50. shows a typical CDF integration analysis report format. All of the data fields mentioned in the error messages are printed out so the error can be verified by visual inspection. The "STAT" column prints the entire "OLD" and "NEW" record when a "change" error message occurs. Thus, the exact nature of the change is immediately evident.



RUN DATE 08/13/76  
AS OF DATE 05/31/76

O U A MANAGEMENT INFORMATION SYSTEM

CDF INTEGRATION ANALYSIS

G/C NUMBER	CIC CODE	OJA CODE	ALPHA CODE	CONG DIST	PPC CODE	ACTG INST	PROC INST	START DATE	END DATE	CUMULATIVE OBLIGATIONS	CUMULATIVE DISBURSEMENTS	STAT	SIG	E	ERR
NAS 5 21984	2626505	05103700	V156000	09	SE	51	51	01/31/74	09/01/75	174,447	168,886				8 *
NAS 5 22167	1006717	00200100	U114000	01	SE	51	51	02/01/73	03/31/73	2,897	2,373	OLD			A **
NAS 5 22167	1006717	00200100	U115000	01	SE	51	51	02/01/73	03/31/73	2,897	2,373	NEW			A **
NAS 5 22277	1264340	03615850	S743005	28	SE	51	51	11/13/73	11/12/74	4,000	3,037				8 *
NAS 5 22341	1349505	03602810	C568000	20	SE	51	51	05/06/75	09/05/75	76,300	51,906				8 *
NAS 5 22343	1698505	02503700	H149000	08	SE	51	51	05/14/75	11/07/75	93,300	66,548				8 *
NAS 5 22441	1966001	02605600	U178000	02	SE	51	51	05/15/75	08/30/75	19,953	16,762				8 *
NAS 5 23085	1006717	00200100	U114000	01	SE	51	51	02/14/72	12/14/72	17,235	17,235	OLD			A **
NAS 5 23085	1006717	00200100	U115000	01	SE	51	51	02/14/72	12/14/72	17,235	17,235	NEW			A **
NAS 5 23125	1101138	03102200	U190000	01	SE	51	51	06/23/72	12/31/75	58,386	58,933				8 *
NAS 5 23133	2125508	04207200	P202000	23	SE	51	51	06/29/72	04/30/75	228,631	225,175				8 *
NAS 5 23267	1966001	02605600	U178000	02	SE	51	51	06/21/73	09/13/75	28,684	26,949				8 *
NAS 5 23658		02504600						07/06/76	10/31/76	0	0			E	2
NAS 6 1808	1006717	00200100	U114000	01	SE	53	53	03/27/70	03/01/71	133,136	133,136	OLD			A **
NAS 6 1808	1006717	00200100	U115000	01	SE	53	53	03/27/70	03/01/71	133,136	133,136	NEW			A **
NAS 6 1932	1006717	00200100	U114000	01	SE	53	53	02/11/71	04/30/73	851,009	851,009	OLD			A **
NAS 6 1932	1006717	00200100	U115000	01	SE	53	53	02/11/71	04/30/73	851,009	851,009	NEW			A **
NAS 6 2613	2168003	01802790	P592001	02	SE	53	53	01/02/75	07/31/75	20,111	20,111				8 *
NAS 7 100	1280502	00601500	C080003	22	SE	55	56	05/05/70	03/31/75	3,054,585,718	2,991,302,041			E	8 *
NAS 8 20172	1119759	00106700	U113000	07	SE	62	62	06/10/65	07/30/74	529,545	529,544				8 *
NAS 8 20765	1162007	00100300	A522020	03	SE	62	62	05/22/67	06/15/74	232,170	232,175				8 *
NAS 8 21140	2125508	04207200	P202000	23	RE	62	62	06/02/67	04/09/75	145,823	145,825				8 *
NAS 8 24908	1129972	00105100	U112000	05	SE	62	62	06/24/69	10/31/75	195,278	195,280				8 *

- ERROR CODE LEGEND
1. INVALID CIC CODE ON CDF RECORD.
  2. NO CIC CODE ON CDF RECORD.
  3. CUMULATIVE OBLIGATION < CUMULATIVE DISBURSEMENT.
  4. NEGATIVE CUMULATIVE OBLIGATIONS.
  5. END DATE > AS OF DATE + 5 YRS.
  6. NEGATIVE CUMULATIVE DISBURSEMENTS.
  7. CHANGED CD, PPC, AI, OR PROC. IN.
  8. ACTIVE CONTRACT END DATE SUSPICIOUS.
  9. DATES REVERSED OR BLANK.
  - A. CHANGED ALPHA CODE

Figure 50.

When an "E" appears in the "E SIG" column, it denotes an excluded contract which is carried on the data base at the system operators option, but which is normally not included in output reports. Such contracts require no corrective action. Indeed, one of the characteristics of such contracts is a high incidence of conditions of the type highlighted by this report.

An error code identifying the problem with each contract listed appears in the last column on the page. A contract may have more than one error; in that event a separate line is printed for each type of error. Asterisks following the error codes define the seriousness of the error. Errors involving university names must always be resolved; hence the associated error code is followed by two asterisks. It is advisable, however, to resolve errors which are only marked with a single asterisk. Finally, minor conditions which should be resolved as time permits, perhaps over a period of months, carry no asterisks.

It is important to note that this file is typically small and tends to get smaller as good system operation continues to improve the integrity of the data

base. A tremendous increase in any type of error messages from one month to another is, therefore, an extremely serious matter and must be investigated before proceeding. Usually a system malfunction or "surprise" FACS change is involved. Total lack of an error message which was common the month before suggests partial system failure.

## 2. CDF to URF Money Roll

This report does not contain error messages, per se. Its function is to summarize the key financial data in the AWCS file on a school-by-school basis. A quick review by an adept system operator will reveal unallowable or suspicious conditions, none of which are machine retrievable. With reference to the sample (totals) page of the report, Figure 51, typical checks include:

- Dollar totals should exceed those of previous month and represent a realistic increase. Order of magnitude is 10%.
- "CFY-OBLS" (Actual dollar values obtained from FACS) should be less than OUA-OBLS (OUA adjusted values used in reports) by up to a few million dollars. (Difference increases with time.) If the difference is

QUA-MIS COF TO URF MONEY ROLL IN WHOLE DOLLARS (LESS E SIG)

RJZ50301

CUA=CODE	UNIVERSITY	#CT	GR	C11	C12	C13	CFY-ORLS	QUA-ORLS	CUM=OBLS	CFY-DISBS	CUM-DISBS
80C05000	UNIV OF NOTTINGHAM	0		0			0	70,381	70,381	0	70,381
80C06000	UNIV OF SOUTHAMPTON	0		0			0	197,120	197,120	4,021	190,275
82C05000	UNIV OF ICELAND	0		0			0	7,000	7,000	0	7,000
84C05000	QUEENS UNIVERSITY	0		0			0	22,000	22,000	0	22,000
85C05000	ISRAEL INST OF TECH	-250		C			-250	98,512	98,512	5,000	87,656
85C07500	TEL-AVIV UNIVERSITY	13,998		13,998			13,998	13,998	13,998	3,495	3,499
86002500	UNIV OF MILAN	0		0			0	87,518	87,518	0	87,518
86C03700	UNIV OF ROCHE	0		C			0	3,364,434	3,364,434	81,463	3,329,379
87005000	UNIV OF WEST INDIES	0		0			0	25,490	25,490	0	25,489
90C05500	UNIV OF LEIDEN	50,000		50,000			50,000	50,000	50,000	25,000	25,000
91002000	UNIV OF AUCKLAND	0		0			0	108,610	108,610	0	108,610
91C03000	UNIV CF CANTERBURY	0		0			0	34,127	34,127	0	11,927
92C05000	UNIV OF OSLO	0		0			0	10,000	10,000	0	10,000
93C05000	UNIV OF PERU	0		0			0	3,300,512	3,300,512	0	3,292,996
95C05000	UNIV CF GCTEBORG	0		0			0	8,000	8,000	0	8,000
95005500	UPPSALA UNIVERSITY	0		0			0	120,252	120,252	4,000	120,252
96C00500	SWISS FED INST TECH	C		C			C	15,000	15,000	0	15,000
97002850	UNIV OF MUNICH	0		0			0	5,000	5,000	0	5,000
97303000	UNIVERSITY OF SPLIT	0		C			0	10,654	10,654	5,328	10,654
GRAND TOTALS											
							69,083,184	69,450,116	1,716,660,501	58,035,195	1,590,581,856

12  
22  
51

Figure 51.

very large then either a record with a large OUA CFY obligation has been added to the AWCS files (See discussion of Transcript 6, page 196 ) or there has been a system malfunction.

- Where the CFY-OBLS from FACS contains negative values, the corresponding OUA-OBLS should read 0. This is an extremely important check. A negative value in the OUA-OBLS column indicates a failure to make proper corrections on the basis of the run 4 AWCS error edit report or failure of run 4 itself.
- Negative CUM-OBLS or CUM-DISBS are highlighted at the contract level on the CDF analysis report. These may be corrected or ignored as previously described. Negative CFY-DISBS are normal and allowable.
- OUA-OBLS of less than \$1000 for individual schools generally represent accounting errors and should not be allowed to remain in most instances. Operator judgement is involved. The cases are highlighted by three asterisks placed between the CFY-OBLS and the OUA-OBS columns.

- The report is sorted on the OUA code. Any institutions with missing OUA codes, therefore, will not be included. Their data are printed on a page following the end of the report. To avoid loss in the reports of obligations data associated with such institutions, they must be suitably adjusted before proceeding.

The "#CT" through "C13" readings will never contain data; they pertain to cancelled fields.

### 3. AWCS Data Report File Edit Analysis Report

Although this report analyses the AWCS file at the individual record level, it is actually performing a system wide check for unusual conditions, some of which are normal and others which are indicative of failures in other parts of the system.

The errors that could be reported are shown as the column headings on the AWCS Data Report (Figure 52). The contracts are listed in the first column and any errors are indicated by an "X" or the numeric value of the field in the appropriate error columns. Normally the quantity of edit messages are fairly consistent from month-to-month, requiring only a quick glance at the report. However, any radical change in the number and, particularly, the type of message is a good indication of serious trouble.

GRANT CONTRACT NUMBER	AI	CONGRESSIONAL DISTRICT	URF	COG NOT IN TBL 8	BLANK UPN/FPN ENG	AI ACT IN TBL 1	AI REPLACE	STATE OUA PREFIX	REG-TBL 6 NC CURR	REG-TBL 7
E NAS 7 100 10 85C	100	10	85C	188	CO 00					
E NAS 7 100 10 850	100	10	850	841	CO 00					
E NAS 7 100 10 85C	100	10	85C	879	CO 00					
E NAS 7 100 10 855	100	10	855	385	CO 00					
E NAS 7 100 1C 86C	100	1C	86C	190	CO 00					
E NAS 7 100 10 86C	100	10	86C	849	CO 00					
E NAS 7 100 10 860	100	10	860	866	CO 00					
E NAS 7 100 10 86C	100	10	86C	867	CO 00					
E NAS 7 100 10 860	100	10	860	949	CO 00					
E NAS 7 100 10 870	100	10	870	189	CO 00					
E NAS 7 100 10 870	100	10	870	883	CO 00					
E NAS 7 100 10 880	100	10	880	169	CO 00					
E NAS 7 100 10 85C	100	10	85C	380	CO 00					
E NAS 7 100 10 890	100	10	890	504	CO 00					
E NAS 7 100 1C 910	100	1C	910	914	CO 00					
E NAS 7 100 10 910	100	10	910	932	CO 00					
E NAS 7 100 10 910	100	10	910	980	CO 00					
E NAS 7 100 10 960	100	10	960	948	CO 00					
E NAS 7 100 1C 980	100	1C	980	180	CO 00					
E NAS 7 100 10 980	100	10	980	945	CO 00					
E NAS 7 100 10 980	100	10	980	981	CO 00					
E NAS 7 100 1C 99C	100	1C	99C	916	CO 00					
E NAS 7 100 10 990	100	10	990	929	CO 00					
E NAS 7 100 55 03C	100	55	03C	090	CO 00					
E NAS 7 100 55 030	100	55	030	303	CO 00					
E NAS 7 100 55 030	100	55	030	330	CO 00					
E NAS 7 100 55 03C	100	55	03C	8284	CO 00					
E NAS 7 100 55 200	100	55	200	8285	CO 00					
E NAS 7 100 55 200	100	55	200	8286	CO 00					
E NAS 7 100 55 200	100	55	200	8287	CO 00					
E NAS 7 100 55 200	100	55	200	8299	CO 00					
E NAS 7 100 55 200	100	55	200	9255	CO 00					
E NAS 7 100 55 200	100	55	200	9827	CO 00					
E NAS 7 100 55 250	100	55	250	141	CO 00					
E NAS 7 100 55 250	100	55	250	143	CO 00					
E NAS 7 100 55 27C	100	55	27C	323	CO 00					
E NAS 7 100 55 300	100	55	300	3055	CO 00					
E NAS 7 100 55 400	100	55	400	647	CO 00					
E NAS 7 100 55 400	100	55	400	776	CO 00					
E NAS 7 100 55 400	100	55	400	777	CO 00					
E NAS 7 100 55 400	100	55	400	778	CO 00					
E NAS 7 100 55 400	100	55	400	779	CO 00					
E NAS 7 100 55 500	100	55	500	150	CO 00					
E NAS 7 100 55 500	100	55	500	310	CO 00					

Figure 52.

Error Message Column

Meaning/Action

ACCOUNTING INSTALLATION USE FLAGS

There are four possible use flags, based on table 01 entries.

FLAG "P"

Flag "P" indicates the contract was awarded by a NASA installation which has only a procurement function, i.e., it is a service organization to other organizations and does not conduct any technical or programmatic functions. This Flag is used when it is proper for the name of the installation to appear in various reports along with the amount of money it has obligated to universities. The Flag then merely indicates the existence of the situation. Use of the Flag is rare.

FLAG "="

Flag "=" automatically takes all descriptive data on contracts for which a Flag P would be otherwise appropriate and transfers it to another installation. The use Flag does not actually appear in the AI USE FLAGS column as with Flag P. Instead, a code is entered in the AI REPLACE column. The effect is to take code "11" (accounting installation 11 which negotiated the contract) and substitute code "10" in all of the system records. This shows up as the "10" in the AI column. As a result in all output reports any action initiated by installation 11 is attributed to installation 10.



**FLAG "N"**

Flag "N" indicates use of an illegal accounting installation code, i.e., an installation that no longer exists. Example: Electronics Research Center, installation #25. The code must remain in the OUA-MIS as it is associated with contracts closed-out before ERC was de-activated. However, appearance of an N code on a new or active award is a condition which requires correction.

**FLAG "T"**

Flag "T" denotes an installation which can only supply technical monitoring. It cannot be a procuring or accounting installation. If a "T" Flag appears, there is probably an error in NASA's accounting record. In the example the contract with the "T" Flag is preceded by the Exclude Flag "E"; hence, it is not necessary to relieve the "T" condition.

**CONGRESSIONAL DISTRICT DIFFERS**

The CDF integration analysis checks for possible Congressional District (CD) errors by comparing FACS data from two successive reports. This is a back-up cross-check which compares the current FACS CD (on the CDF) with the current OUA CD (on the URF). If different, both numbers are listed. Again any significant amount of activity in this area generally indicates re-districting with a probable requirement for updating the URF.

COGNIZANT OFFICE  
CODE NOT IN TABLE  
08

All cognizant office codes on the AWCS file must be entered on Table 08 along with pertinent data, otherwise, output reports will have sort and missing data problems. One or two codes in this column generally indicate an OUA data error, i.e., Financial Management has assigned a new cognizant office code, but OUA did not enter it on Table 08. A large number of these messages indicates a major system failure requiring Programmer assistance. When this error occurs IT MUST BE CORRECTED by Run 1 file maintenance before proceeding. Check for this message every time.

ACCOUNTING INSTAL-  
LATION NOT IN  
TABLE 01

Same situation as for cognizant office above, except applies to accounting installation. Must check every time and correct. (Re this cog--a bad FACS run will do it--so bad that FACS has to start over--means a new Run 2, etc.)

BLANK UPN/FPN  
ENGLISH

This means there is no source for UPN/FPN English used in Ames obligations report. Enter the data on the AWCS file using Transcript 6A, Run #3. (The normal source, FACS, for some reason didn't work this time. Usually associated with adding records via Transcript 6A.)

STATE OUA PREFIX

This indicates an error in the OUA code for the contract on the CDF. Specifically, the first three positions of the CDF version

do not correspond to any of the state codes in Table 06. Basically a complex, internal system check for conditions which will not result in an abort, but will cause output errors in the data. Call for programmer assistance. (Note, however, arbitrarily changing state codes on Table 06 produces the same result as a data error.)

REG--TBL 06 NO CORR  
REG--TBL 07

Similar cross check as above. Compares geographic region codes on tables 06 and 07. Must find matches. Error is either massive system failure or tables (which rarely need to be touched), have been changed in some way.

#### 4. Contract Data Report File Edit Analysis Report

The Greenbook and CASE reports, two of the major OUA-MIS outputs, are reproduced and distributed directly to customers without any intermediate editing. Therefore, they must reflect the highest possible level of accuracy. This edit analysis highlights two types related to those reports; fatal errors which prevent an active contract from appearing in either the Greenbook or CASE report or both; and non-fatals which allow contracts to appear even though some data elements are missing.

It is absolutely essential to relieve fatal errors on contracts which have current Fiscal Year obligations. Otherwise the output of the CASE report and the output of Ames Obligations and the special report

writer will give different values for NASA total Fiscal Year obligations. The highest degree of accuracy is required at the end of the Fiscal Year. At that time the only fatals allowable are for contracts entered in the OUA system (added to the CSF) before they appear in FACS, i.e., OUA is ahead of FACS.

Figure 53. is a typical edit analysis page. Reading from left to right an exclude signal, "E", preceding a contract number means the edit is for information purposes only. No action is required. The next column indicates when a fatal error is the result of FACS, i.e., a contract has been added to the CSF by OUA before it appears in FACS. No action is required. Fatal is always printed out, where applicable, and usually affects both reports. The word is only printed once, even though the contract may have more than one fatal error. Fatal error messages are preceded by asterisks. A blank in the column indicates a non-fatal error.

In the following table (Figure 54) all of the possible error messages are listed, the reports affected described, the severity level is shown and corrective actions noted. As may be seen by inspection, some of the checks are back-ups for ones made in earlier edits. It is this after-the-fact redundancy, coupled with the extensive input edits which allow the OUA-MIS to achieve and maintain its high level of accuracy.

C6/08/77

QUA MANAGEMENT INFORMATION SYSTEM

RUN DATE 05/26/77  
#S OF DATE 03/31/77

C U A - MANAGEMENT INFORMATION SYSTEM  
CONTRACT DATA REPORT FILE  
EDIT ANALYSIS

PAGE 1  
HUZ507CX

GRANT / CONTRACT NUMBER	AHEAD OF	FACS	LEVEL OF SEVERITY	DESCRIPTION OF ERROR
A 9441B	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 1 14862	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 2 9539	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 5 23649			* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 5 24080	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 5 24130	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
E NAS 7 100				CONTRACT TEXT MISSING OR BLANK
E NAS 7 270				CONTRACT TEXT MISSING OR BLANK
NAS 8 31717	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 8 31785	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 8 31875	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 8 32437	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 9 15092			* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NAS 9 15274	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
E NAS# 6				CONTRACT TEXT MISSING OR BLANK
NCA 2035702	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NCA 2050703	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NCA 2050704	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NCA 2587702	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NCA 2685707	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO
NCA 5 9	X		* FATAL	CUMULATIVE OBLIGATIONS EQUAL ZERO

Figure 53.

Run 5A

Summary Table of Error Messages

<u>Message</u>	<u>Level</u>	<u>Affects</u>	<u>Frequency Of Message</u>	<u>Action/Comments</u>
University Name missing or blank	Fatal	Greenbook	Infrequent	Long form university name is missing; must be added to URF.
State Name missing or blank	Fatal	CASE/Green- book	Very Rare	Indicates State data missing from ARF Table 06 or massive system failure.
OUA Code blank	Fatal	CASE/Green- book	Rare	Add proper OUA Code to CDF.
Cumulative Obligations equal zero	Fatal	CASE/Green- book	Common	Generally indicates pro- blems in all obligations and disbursement fields. Correction via AWCS FM required only if con- tract must be included to stay in step with FACS or for other rea- sons known to system operator. No action required if OUA is ahead of FACS.
Invalid OUA contract status code	Non-fatal	Greenbook	Very Rare	System failure has set status code to other than 1 or 3. Contact programmer.

Figure 54

<u>Message</u>	<u>Level</u>	<u>Affects</u>	<u>Frequency of Message</u>	<u>Action/Comments</u>
CASE field of science code blank	Fatal	CASE/Green-book	Common	Add proper code to CDF.
First principal investigator name blank	Non-fatal	CASE/Green-book	Common	Add Principal Investigator name to CDF.
First technical officer name blank	Non-fatal	CASE/Green-book	Common	Add Technical Officer name to CDF.
CASE Objective of study code blank	Fatal	CASE/Green-book	Common	Add objective code to CDF.
Contract Text missing or blank	Non-fatal	Greenbook	Common	Add text to TDF. While not fatal, this error should be corrected, as it leaves an extremely obvious "hole" in the printed greenbook.
CASE field of science English missing	Non-fatal	CASE	Very rare	Indicates field data missing from ARF Table 05 or massive system failure.
Contract Alpha Code blank	Non-fatal	CASE	Very rare	Potential university name problem in FACS. Cross-check on previous edits only. Not necessary to relieve this condition, as long as contract is attributed to proper institution.
NSF FICE code blank	Fatal	CASE	Rare	Add proper code to URF.
Contract start date blank	Non-fatal	Greenbook	Common	Add proper date to CDF. Non-fatal but should be corrected.

Figure 54 (Continued)

<u>Message</u>	<u>Level</u>	<u>Affects</u>	<u>Frequency of Message</u>	<u>Action Comments</u>
Contract end date blank	Non-fatal	Greenbook	Common	As above.
Negative current obligations	Non-fatal	CASE/Greenbook	Rare	Cross-check on previous reports. One or two messages indicate failure to act upon all items in Run 4 AWCS edit report. Multiple messages indicate failure to run or program crash of Run #4.
PTO location invalid	Fatal	CASE/Greenbook	Infrequent	This edit is triggered only when a primary technical officer location, (installation) code is not valid on ARF Table 01 and the contract has a medical school flag set. Insert proper PTO location on CDF.

Figure 54 (Continued)



## B. Run 5b--System Validation and Integration

After a satisfactory result has been obtained from review of Run 5a and any necessary re-cycling and rerunning of 5a, Run 5b is executed to "lock-up" the files for the end of the month. At this juncture, the files which, collectively, form the OUA-MIS data base are the CDF, ASF, TDF and the PCF. Essential control-type data leads to inclusion of the URF and ARF files in the data base for lock-up purposes.

### 1. Production of Integrated Data Files for Report Production

It is not efficient from an ADP standpoint to access any or all of these six files each time an output report is specified. Hence, run 5b integrates the files, producing two validated files from which subsequent reports are produced. Reports at the end of the month are generated as summarized below:

<u>File Name</u>	<u>Reports</u>	<u>Auxilliary File needed</u>
Ames Data Report File (ADRF)	Ames Obs	--
	Ames Special	--
	RTOP	ASF
Contract Data Report File (CDRF)	Greenbook	URF
	CASE	URF
	DANALYST	PCF
	UNICODE/UNILIST	URF

Several important observations must be made about the above table.

- The ADRF file is saved and available for a long time period. The two AMES reports may be successfully run from any prior ADRF merely by specifying the date (always end-of-month) desired.
- The RTOP report, added to the system after the initial design was completed, also needs the current month ASF file. As a result RTOP reports can only be run before the 5b validation for the next month is accomplished. After that time the prior month's ASF File is no longer available.
- The CDRF File is not a stand alone. When it is run the URF must be accessed to obtain university names. All OUA codes on the CDRF must match OUA codes on the URF. Thus reports from the CDRF cannot be successfully run after the URF is updated, i.e., it is not the same URF which existed at the time the CDRF was created. This approach leads to a much simpler program and was the result of a conscious decision not to allow

the CDRF reports to be run on a historical basis, as opposed to the concept of the ADRF reports.

- The DANALYST and the UNICODE/UNILIST reports do not run from locked-up files as neither contain obligation values which must be validated at monthly intervals. These two reports directly access the PCF and URF files, respectively, utilizing the data as it exists in the most recent file update.

## 2. Output Reports Generated

When the system is validated, three output reports are produced:

- Dump of AWCS Statistics File  
This report, illustrated as Figure 55, lists all financial records associated with all contracts in the OUA system. Values are as validated by 5a on the "as-of" date. The first record shown for each contract is a "dummy" used internally by the system; it contains no data. The remaining records contain full fiscal coding identification,

DUMP OF AWCS STATISTICS FILE  
AS OF: JUNE 30, 1976

BUZ00060

G/C NUMBER	AI	COG	AWCS CODE	GF	CFY OBS	OJA CFY OBS	OJA CUM OBS	CFY DIS	CUM DIS
NAS 1 12754	23	702	513-52-01		0	0	29,840	8,541	28,834
NAS 1 12754	23	702	768-81-02		0	0	19,018	3,637	18,402
NAS 1 12754	23	704	506-16-36		0	0	338	0	0
NAS 1 12754	23	704	506-18-21		0	0	10,000	8,236	8,236
NAS 1 12754	23	840	811-22-00		0	0	2,700	2,025	2,025
NAS 1 12762					0	0	0	0	0
NAS 1 12762	23	850	188-00-00		0	0	5,000	0	5,000
NAS 1 12762	23	850	188-45-52		0	0	1,632	0	1,632
NAS 1 12798					0	0	0	0	0
NAS 1 12798	23	680	642-12-00		0	0	58,650	2,127	58,650
NAS 1 12793	23	680	683-00-00		0	0	41,000	0	41,000
NAS 1 12633					0	0	0	0	0
NAS 1 12633	23	704	502-04-41		0	0	24,974	24,974	24,974
NAS 1 12840					0	0	0	0	0
NAS 1 12840	23	840	815-20-00		-2,526	0	21,070	2,462	21,069
NAS 1 12976					0	0	0	0	0
NAS 1 12976	23	702	760-03-02		0	0	39,395	8,065	22,553
NAS 1 13129					0	0	0	0	0
NAS 1 13129	23	850	863-00-00		0	0	72,000	0	72,000
NAS 1 13129	23	850	863-11-00		263,000	263,000	936,617	254,427	434,863
NAS 1 13175					0	0	0	0	0
NAS 1 13175	23	030	997-00-00		16,553	0	16,553	0	0
NAS 1 13175	23	250	141-95-01		3,718	3,718	3,718	0	0
NAS 1 13175	23	630	175-21-32		0	0	12,745	9,749	9,749
NAS 1 13175	23	680	601-14-00		5,115	0	5,115	0	0
NAS 1 13175	23	680	638-10-00		0	0	31,789	1,888	31,789
NAS 1 13175	23	680	633-78-32		4,100	3,903	4,100	0	0
NAS 1 13175	23	702	505-03-34		0	0	16,721	7,702	16,169
NAS 1 13175	23	702	505-03-13		0	0	4,697	4,697	4,697
NAS 1 13175	23	702	505-03-41		14,497	0	14,497	7,815	7,815
NAS 1 13175	23	702	505-08-95		44,677	0	44,677	9,924	9,924
NAS 1 13175	23	702	760-64-60		0	0	10,000	1,950	7,221
NAS 1 13175	23	704	506-15-21		0	0	4,000	2,630	3,575
NAS 1 13175	23	820	989-15-00		5,227	0	38,919	16,937	37,678
NAS 1 13175	23	640	450-02-02		-86,266	0	0	0	0
NAS 1 13204					0	0	0	0	0
NAS 1 13204	23	680	175-21-32		0	0	40,000	0	31,342
NAS 1 13204	23	680	175-40-30		493	493	493	0	0
NAS 1 13204	23	680	638-10-00		0	0	2,500	0	2,500
NAS 1 13213					0	0	0	0	0
NAS 1 13213	23	702	505-10-21		25,000	25,000	25,000	17,560	17,560

Figure 55.

viz. accounting installation (AI), cognizant office (COG), and agency wide financial code (AWCS). (GF is a cancelled field.) Data for each financial segment within a particular contract include:

- CFY OBS            Current fiscal year obligations as extracted from FACS.
  
- OUA CFY OBS      Current fiscal year obligations used by OUA after suitable negative and other required adjustments have been made.
  
- OUA CUM OBS      Cumulative obligations since the beginning of the fiscal segment. With rare exception these are the same values provided by FACS.
  
- CFY DIS           Current fiscal year disbursements. Actual FACS value for payouts from the Treasury. Also known as

expenditures and outlays.

CUM DIS            Cumulative disbursements as  
                     carried in FACS.

The totals on the final page of this report should be checked in much the same way as those of the previously discussed CDF to URF Roll report to ensure the file has actually up-dated. Note that all totals will be appreciably higher as this file contains contracts with "E" signals while the Roll report does not. Inclusion of the "E" JPL contracts NAS7-100 and NAS7-270 accounts add around \$250 Million to the current fiscal year totals and some \$3 Billion to the cumulatives.

- Contract Select File List Report (Figure 56.)

This report is a record of all of the contracts on the CSF File at validation time. Only the fact of the contract number being on the list is useful. The remaining data is merely that which was associated with the contract when it was added to the file (the add date is under

CONTRACT SELECT FILE LIST REPORT  
AS OF: NOVEMBER 30, 1976

G/C NUMBER	CIC CODE	ALPHA PPC	DIVISION	ENGLISH CD	BT	CUA CODE	YMMDD	AC	ID
NSR44	5016					0480910	730427		C BB
NSR44	5059					0480910	730427		C BB
NSR44	5106					0480910	730427		C BB
NSR44	6023					0480910	730427		C BB
NSR44	6031					0480910	730427		C BS
NSR44	6065					0480910	730427		C BB
NSR44	6100					0480910	730427		C BB
NSR44	12039					0480910	730427		C BB
NSR44	12120					0480910	730427		C BB
NSR44	12206					0480910	730427		C BB
NSR47	3010					0510270	730427		C BB
NSR47	3011					0510270	730427		C BB
NSR47	5070					0510330	730427		C BB
NSR47	7003					0530200	730427		C BB
NSR48	2054					0540180	730427		C BB
NSR49	1039					7300520	730427		C BB
NSR52112001						7300520	730427		C BB
NSR52112002						8400500	730427		C BB
NSR52112003						7300550	730427		C BB
NSR52125001						0020010	750118		C BC
P	57717	1277615	U115000	SE	UNIV ALASKA FAIRBANK	01			C BC
P	62873	1936509	U174000	SE	UNIV MARYLAND COLLEG	05			C BC
S	27376B	1304500	C228000	SE		21			C BC
S	53744A	1646501	G1E0000	SE		01			C BC
S	53939A	1283001	U131000	SE	UNIV CALIF SAN DIEGO	40			C BC
S	54214A	1966001	U176000	SE	UNIV MICHIGAN ANN AR	02			C BC
S	54383A		U141000						C BB
S	54523A		U141000						C BB
S	55672A	1080134	U177000	SE	UNIV MIAMI	15			C BC
S	59151A	1936509	U174000	SC	UNIV MARYLAND COLLEG	05			C BC
S	59186A	1306000	C250000	SE	CATHOLIC UNIV	01			C BC
S	59190A	1020445	A348000	SE	AMERICAN UNIV	01			C BC
SNPC	31		U178000						C BB
W	13890		P592000						C BB
W	13995	1939503	M234000	SC	MASS INSTITUTE TECHN	08			C BC
W	13996	2126001	U207000	SC	UNIV PENNSYLVANIA	01			C BC
W	14048	1294479	U220000	SC	UNIV SANTA CLARA	10			C BC
W	14061	1366509	U145000	SC	UNIV CONNECTICUT	02			C BC
W	14108	1283001	U131000	SC	UNIV CALIF SAN DIEGO	43			C BC
W	14132	1750504	U161000	SC	UNIV ILLINOIS URBANA	21			C BC
W	14162	1029205	U241000	SC	UNIV TOLEDO	09			C BC
W	14206	1553007	U152000	SC	UNIV FLORIDA	02			C BC

CSF CONTAINS 8127 RECORDS.

Figure 56.

YYMMDD). Once the run 1 in which these data were added has been processed, they are used no where else in the system. Indeed, they should not be, as for most purposes the data is either misleading or actually wrong (outdated).

- Policy Compliance File List Report (Figure 57)

This is selected data from the policy compliance file listed for aid in file maintenance. Data corresponds directly to the source input fields on the Form 1356 as follows:

<u>Name</u>	<u>Form 1356 Block</u>
Grant/Contract	15
Proposal number	2
Institution	1
Tech Officer Installation	7
Procuring Installation	26e
Proposal received	21
Start date	22
End date	23
Mod No.	16
Type of action (T)	19

The "F" Field is no longer used, while an "X" in the "3" Field verifies the source of the data as a NASA Form 1356.



RUN DATE 02-02-77

AS OF DATE 12-31-76

OUA MANAGEMENT INFORMATION SYSTEM

PCF FILE LIST

PAGE 11

BUZC0066

GRANT/CONTRACT	PROPOSAL NO.	INSTITUTION	TO-IN	PROC	PROP RCVD	START	END	MOD.	T	F3
NAS 9-14892		UNIV TEXAS-AUSTIN	JSC	JSC		10-01-76	11-15-76	S02	4	X
NAS 9-14898		TEXAS ARM UNIVERSITY	JSC	JSC		02-18-77	06-15-77	02	4	X
NAS 9-14970		PURDUE UNIVERSITY	JSC	JSC			05-31-77	03	6	X
NAS 9-15000		UNIV HOUSTON-HOUSTON	JSC	JSC			05-31-77	01	2	X
NAS 9-15003		UNIV OF KANSAS	JSC	JSC	05-07-76	08-01-76	07-31-77		1	X
NAS 9-15003		UNIV OF KANSAS	JSC	JSC		07-31-77	07-31-77	S01	2	X
NAS 9-15081	63238	PURDUE UNIVERSITY	JSC	JSC	06-18-76	08-01-76	05-31-77		1	X
NAS 9-15081		PURDUE UNIVERSITY	JSC	JSC			05-31-77	01	6	X
NAS 9-15092		VANDERBILT UNIVERSITY	JSC	JSC	08-09-76	12-01-76	09-01-77		1	X
NAS 9-15093		UNIV TEXAS-AUSTIN	JSC	JSC			07-31-77	01	6	X
NAS 9-15106		UNIV MICH-ANN ARBOR	JSC	JSC		01-01-77	03-31-77	S01	4	X
NAS 9-15125		TEXAS A&M UNIVERSITY	JSC	JSC	07-12-76	08-01-76	12-31-76		1	X
NAS 9-15147		BRANDEIS UNIVERSITY	JSC	JSC	08-12-76	09-01-76	08-31-77		1	X
NAS 9-15164		UNIV TENNESSEE-KNOXV	JSC	JSC	08-19-76	10-21-76	05-01-78		1	X
NAS 9-15175	63834	TEXAS A&M UNIVERSITY	JSC	JSC	07-13-76	11-23-76	11-30-77		1	X
NAS 9-15178		SO DAKOTA STATE UNIV	JSC	JSC	10-04-76	10-11-76	03-31-77		1	X
NAS 9-15193		UNIV HOUSTON-HOUSTON	JSC	JSC	09-15-76	11-01-76	11-01-77		1	X
NAS 9-15213	63854	UNIV OF LOUISVILLE	JSC	JSC	06-05-76	12-01-76	11-30-77		1	X
NAS 9-95-470		NEW MEX ST U-LAS CR	JSC	JSC			09-30-76	S01	6	X
NASW 2996	63780	UNIV CALIF-SAN DIEGO	HQ-SA	HO	05-29-76	07-01-76	06-30-77		1	X
NAS10-8920		UNIV OF FLORIDA	KSC	KSC	11-19-75		12-02-76	02	2	X
NAS10-8920		UNIV OF FLORIDA	KSC	KSC	11-22-76	12-02-76	12-02-77	03	3	X
NAS10-8926		UNIV OF MIAMI	KSC	KSC		01-03-77	03-05-77	01	4	X
NAS10-8934		FLORIDA TECH UNIV	KSC	KSC	12-17-75	01-06-77	03-05-77	01	3	X

Figure 57.

### 3. Requesting Run 5 Reports

Use special pink external data input submittal form (Figure 58.) Check either a or b under Run 5, depending on which is desired. Separate run requests must be submitted for runs 5a and 5b; they cannot be on the same input form. The CSF, ASF or PCF lists are automatically produced when 5b is specified; therefore, 5c-5e should not be checked at the same time.

It is sometimes desirable to have a CSF, ASF or PCF list before the normal run 5b production. These reports may be produced any time merely by ordering c, d, or e, as required. The report will reflect the configuration of the requested file on the day the report is run. The AWCS File listing is often needed in advance to correct errors highlighted by run 4. While the CSF and PCF lists are available separately, the situations requiring them are extremely rare.

Caution: A common input/output error is to inadvertently validate the files by running a 5b at the same time. If this happens the files must generally be backed-up and other time-consuming tasks performed. Thus, 5c-e should be used sparingly.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
EXTERNAL SOURCE DATA INPUT SUBMITTAL**

**SECTION I TO BE COMPLETED BY THE SUBMITTING OFFICE (See instructions on reverse)**

1. SUB-SYSTEM TITLE <b>OFFICE OF UNIVERSITY AFFAIRS MANAGEMENT INFORMATION SYSTEM</b>		2. AS/OF DATE <b>--</b>	3. FILE I.D. <b>U201</b>	
4. TYPE OF INPUT (Card, tape, form, etc.) <b>Transcripts                      Cards X1200 Instructions              RCF</b>		5. CONCERNING THE DATA NOW BEING SUBMITTED AS INPUT ON THIS FILE I.D. FOR THIS AS/OF DATE: <small>(Check one column on each item)</small>		
6. NO. OF ITEMS OF INPUT <b>--</b>		A. WERE PARTIAL SUBMISSIONS MADE PRIOR TO THIS ONE?	YES <b>--</b>	NO <b>--</b>
7. DISPOSITION OF INPUT ITEMS <b>Return to Submitter</b>		R. DOES THIS SUBMISSION COMPLETE THE TOTAL INPUT?	YES <b>--</b>	NO <b>--</b>
			TIME <b>--</b>	DATE <b>--</b>

**REMARKS**

- I. RUN 7 REPORT SERIES (Check Only One Line)**  
(Report Control Form Must Be Attached)
- |  |                  |       |
|--|------------------|-------|
|  | <u>Full Size</u> |       |
| a. <input type="checkbox"/> UNICODE/UNILIST (UH01) |                  | _____ |
| b. <input type="checkbox"/> GREENBOOK (UH02)       |                  | _____ |
| c. <input type="checkbox"/> AMES OBLIGATION (UH03) |                  | _____ |
| d. <input type="checkbox"/> AMES SPECIAL (UH04)    |                  | _____ |
| e. <input type="checkbox"/> C.A.S.E. (UH05)        |                  | _____ |
| f. <input type="checkbox"/> DANALYST (UH06)        |                  | _____ |
| h. <input type="checkbox"/> RTOP ANALYSIS (UH08)   |                  | _____ |
| i. <input type="checkbox"/> HQ RENEWAL (UH09)      |                  | _____ |

Request No. \_\_\_\_\_ of \_\_\_\_\_

Notes: 1. Complete either I or II.  
2. X1200 Instructions must be attached unless "Full Size" is checked.

**SPECIAL INSTRUCTIONS**

**II. REPORTS FROM TAPE**

Use Tape No. \_\_\_\_\_, Dated \_\_\_\_\_  
\_\_\_\_\_ X1200 Per Attached Instructions  
\_\_\_\_\_ Full Size

9. SIGNATURE OF SUBMITTING OFFICIAL	10. OFFICE CODE <b>P</b>	11. TIME AND DATE SUBMITTED
-------------------------------------	-----------------------------	-----------------------------

**SECTION II TO BE COMPLETED BY DATA PREPARATION SECTION**

12. ROUTING	13. LINE ITEM COUNT	14. LOG. NO.	15. PRODUCT CODE	16. PRIORITY	17. DUE DATE
18. RECIPIENT	19. ACTUAL COUNT	20. RELEASED TO		21. TIME AND DATE RELEASED	

22. REMARKS

Figure 58.

## FISCAL YEAR ANNUAL START

### A. Run 6 - Annual Start

#### 1. Purpose

All of the OUA-MIS files are continuous from year-to-year with the exception of the Policy Compliance File (PCF). That is, while most of the files are merely updated from their previous position at the end of the fiscal year, the PCF is concerned only with annual information and, therefore, must be "re-started" each year.

Re-starting the PCF has two main functions:

- It blanks all prior year cost sharing data, so that cost sharing reports for the new year only may be written.
- It removes PCF records no longer required by the system. This prevents a system malfunction due to file overflow.

The only reports based on the PCF are the DANALYST, including the "1356-received" counters (Tables VI and VII), the OSS DANALYST and the cost sharing reports. Cost sharing reports for the new fiscal year are the only ones which depend on Run 6. (The reports will run without a run 6, but will be totally inaccurate.)

Run 6 may be initiated anytime after the end-of-fiscal year Run 5b lock-up. It is safer to wait until

- Headquarters  
Renewal Report

Also known as the Office of Space Science (OSS) DANALYST Report - (This report is currently not in use, but the capability for producing this special report for OSS exists within the system.)

- RTOP Analysis  
Report

The Research and Technology Operations Plan (RTOP) Report provides the funds obligated by the Office of Aeronautics and Space Technology for each specific type of research. The research categories are designated by the RTOP number assigned to each contract.

The AMES Obligations, Greenbook and RTOP reports are produced on a monthly basis. The CASE Formal Report is generated on a yearly basis, as mentioned above, but it can be produced monthly. The rest of the reports are produced as required.

Run 7 requires preparation of the OUA-MIS Report Control Form (RCF) previously shown as Figure 6. and repeated on the next page. The RCF is used to indicate the desired report options and dates for the run. A different RCF must be prepared for each type of report required. Preparation of the form and additional input for each report are described below as well as examples of the generated reports.

A. Generation of the UNICODE Report

1. Preparation of the Request Form

Submission of a request for this report requires checking the appropriate option on the Report Control Form and supplying the as-of-date. Entering the current date as the as-of-date will ensure access to the latest data.

# OUA - MIS REPORT CONTROL FORM (RCF)

**ALL REPORTS**

As-of-Date / /  
Run Date / /

**UNIVERSITY REPORTS (UNICODE/UNLIST)**

**UNICODE**

- 1. Regular Run
- UNLIST**  
Report Type: (Check One)
- 1. List
  - 2. Mailing Labels
- Addressee: (Check One)
- 1. Presidents
  - 2. Research Coordinators
  - 3. Business Officers
  - 4. Special Input

**Special Name:**

**Special Title:**

**Status Selection Option**

- 1. All Addresses
- 2. Active or Active FY    Only
- 3. Obligation or Obligation FY    Only
- 4. Mailing List Subscribers Only
- 5. All Universities (Default)

**Type of Institution Option**

- 1. Foreign
- 2. Foreign and Domestic
- 3. Domestic Only (Default)

**NASA'S UNIVERSITY PROGRAM (GREENBOOK)**

- 1. Tape for Publication

**Internal Reports**

- 2. Standard Report
- 3. Installation Reports
  - 3A. Ames Research Center
  - 3B. Flight Research Center
  - 3C. Goddard Space Flight Center
  - 3D. Kennedy Space Center
  - 3E. Langley Research Center
  - 3F. Lewis Research Center
  - 3G. Marshall Space Flight Center
  - 3H. Johnson Space Center
  - 3I. Wallops Station
  - 3J. NASA Headquarters
- 4. Program Office Reports
  - 4A. OA
  - 4B. OAST
  - 4C. OSS
  - 4D. OMSF
  - 4E. Staff Offices
  - 4F. OUA

**Internal Report Condition Options**

- 5. Active Projects Only
- 6. Projects with CFYOBs Only
- 7. Completed Projects Only
- 8. Grants Only
- 9. Contracts Only
- 10. Include FFRDC's
- 11. Include Appendix E

**AMES OBLIGATION REPORT OPTIONS**

- 1. Cumulative Reports
- 2. Fiscal Year Reports

**AMES SPECIAL REPORT (T.17)**

- 1. Standard Report, Card Serial #'s

**C.A.S.E. REPORT**

- 1. Medques Report
- 2. Institution/Field-of-Science
- 3. R (Basic/Applied) & D
- 4. NSF Report (6-YY Only)
- 5. Disbursements
- 6. Report Year    (YY or MO)

**DANALYST REPORT (Dates Inclusive)**

- 1. From Month
- 2. From Year
- 3. To Month
- 4. To Year

**REPORT TITLE**

**RTOP ANALYSIS REPORT**

- 1.    A. Raw Obligations
- B. Edited Obligations
- C. Expenditures

**HQ RENEWAL REPORT**

**Renewal Selection (Inclusive)**

- 1. From Month
- 2. From Year
- 3. To Month
- 4. To Year

**Due Selection (Inclusive)**

- 1. From Month
- 2. From Year
- 3. To Month
- 4. To Year

Figure 6. repeated

The run date is only entered if the run involves a special request for a customer. Normally, the run date is the actual date of processing by default.

ALL REPORTS

As-of-Date		/		/		/		/		/		/		/		/		/		/
Run Date		/		/		/		/		/		/		/		/		/		/

UNIVERSITY REPORTS (UNICODE/UNILIST)

UNICODE

1. Regular Run

The report is produced by extracting the data directly from the University Reference File which produces alphabetized listings as described below.

2. Output Generated

The UNICODE report consists of two basic formats. Each format should be thought of as a separate part of the same report. Part I, Figure 59, displays the institution name and location, the assigned OUA code, proposal code, FICE (NSF), alpha code, university status, student population, FICE (OE), and Congressional District. Part II, Figure 60, shows the full institution name and address, Congressional District, student population, proposal code and short university name. Part II may be detached and

UNICODE REPORT 1A

STANDARD UNIVERSITY NAME AND CODE LIST

BUZ71105

AS OF JULY 21, 1976

RUN DATE 07/21/76

ALPHABETICAL BY STATE

INSTITUTION	LOCATION	OUA CODE	PROP CODE	FICE NSF	ALPHA CODE	STATUS CODE	STUDENT POP	FICE OE	CONG DIST
BRADLEY UNIVERSITY	ILL	01701200	14-019	0016410	B424000	PN 72 72 F	5236	001641	18
CHICAGO STATE UNIV	ILL	01701600		0016949	C000000	GSX76X76N	5634	001694	05
DEPAUL UNIVERSITY	ILL	01702000	14-002	0016717	D000000	PD	9567	001671	
GREENVILLE COLLEGE	ILL	01702500	14-016	0016840	G369100	PDX76X75	913	001684	24
ILL INST OF TECH	ILL	01704600	14-004	0016915	I037000	PNX76X76 F	6375	001691	05
ILLINOIS STATE UNIV	ILL	01704800	14-024	0016923	I000000	GS	18819	001692	
LOYOLA UNIV-ILL	ILL	01705500	14-006	0017103	L000000	PD	15199	001710	
MARSHALL LAW SCHOOL	ILL	01705750		0016980	M201000	PN	1753	001698	
MUNDELEIN COLLEGE	ILL	01706000	14-017	0017319	M000000	PN W	1224	001731	11
NORTHESTN ILLINOIS U	ILL	01706250		0016931	N000000	GS	9945	001693	
NORTHERN ILLINOIS U	ILL	01706500	14-010	0017376	N307000	GS	22791	001737	10
NORTHWESTERN UNIV	ILL	01707900	14-007	0017332	N323000	F	14852	001739	24
ST LU U PARKS COL	ILL	01708800	14-018	0039701	P000000	PD	2301	003970	24
SO ILL UNIV-CARBONDL	ILL	01709700	14-008	0017582	S543000	GSX76X75 F	19147	001758	24
UNIV OF CHICAGO	ILL	01710100	14-001	0017749	U135000	PNX76X76 F	7496	001774	01
UNIV ILLINOIS-CHICGO	ILL	01710200	14-012	0017764	U160000	GSX76X75 F	19720	001776	07
UNIV ILLINOIS-URBANA	ILL	01710630	14-005	0017756	U161000	GSX76X76 F	35952	001775	21
WESTERN ILLINOIS U	ILL	01710650	14-013	0017863	W000000	GS	15469	001780	
BALL STATE UNIVERSITY	IND	01800300	15-009	0017863	B070000	GSX76X76 F	17108	001786	10
GOSHEN COLLEGE	IND	01801000		0017996	G288000	PD	1242	001799	
INDIANA INST OF TECH	IND	01801250	15-011	0018051	I000000	PN X	436	001805	
INDIANA ST UNIV	IND	01801500		0018077	I000000	GS	15406	001805	07
INDIANA U-BLOOMINGTN	IND	01802100	15-003	0018093	I061000	GSX76X76 F	30714	001809	11
INDIANA U-INDIANAPLS	IND	01802400		0018101	I062000	GSX76X74	17666	001813	02
PURDUE UNIVERSITY	IND	01802790	15-005	0018259	P592000	GSX76X76 F	26582	001825	07
ROSE-HULMAN INST TEC	IND	01802900	15-008	0018309	R353000	PNX76X76 F	1022	001830	02
UNIV OF EVANSVILLE	IND	01803000		0017954	U000000	PD	5118	001795	
UNIV OF NOTRE DAME	IND	01803800	15-004	0018408	U195000	PDX76X76 F	8393	001840	03
VALPARISO UNIV	IND	01804000	15-006	0018424	V000000	PD	4476	001842	
ORAKE UNIVERSITY	IOWA	01901000		0018606	D000000	PN	7244	001860	04
GRINNELL COLLEGE	IOWA	01901500	16-003	0018689	G000000	PN	1314	001868	
IOWA STATE UNIV	IOWA	01902500	16-002	0018697	I292000	GSX76X76 F	19629	001869	05
STIMPSON COLLEGE	IOWA	01903000	16-004	0018879	S000000	PD	915	001887	
UNIV OF IOWA	IOWA	01904200	16-001	0018929	U162000	GSX76X76 F	20709	001892	01
WARTBURG COLLEGE	IOWA	01905000	16-005	0018960	W081000	PD 73 72 F	1290	001896	03
EMFORIA KAN ST COL	KAN	02000300	17-005	0019273	E000000	GS	6013	001927	05
FT HAYS-KANSAS ST C	KAN	02000630	17-006	0019158	F000000	GS	4603	001915	
KANSAS STATE UNIV	KAN	02002500	17-001	0019281	K032000	GSX76X76 F	15158	001928	02
UNIV OF KANSAS	KAN	02004300	17-002	0019489	U164000	GSX76X76 F	21359	001948	03
WICHITA STATE UNIV	KAN	02004400	17-003	0019505	W300000	GSX76X76 F	14766	001950	04
KENTUCKY STATE UNIV	KY	02101000	18-007	0019687	K101000	GSX76X76N	2000	001968	06
MURRAY STATE UNIV	KY	02102000	18-004	0019778	M000000	GS	7337	001977	
TRANSYLVANIA UNIV	KY	02102500	18-005	0019877	T000000	PN	697	001987	
UNIV OF KENTUCKY	KY	02103510	18-001	0019893	U165000	GSX76X76 F	20986	001989	06
UNIV OF LOUISVILLE	KY	02103600	18-002	0019992	U166000	GLX76X76 X F	12230	001999	03
WESTRN KENTUCKY UNIV	KY	02105000	18-006	0020024	W000000	GS	12017	002002	03
CENTENARY COLLEGE	LA	02200200	19-009	0020032	C263000	PD	787	002003	04

Figure 59.



UNICODE REPORT 2A

STANDARD UNIVERSITY NAME AND CODE LIST

BUZ71108

AS OF JULY 21, 1976

RUN DATE 07/21/76

ALPHABETICAL BY STATE

INSTITUTION FULL NAME	INSTITUTION ADDRESS	CONG DIST	STUDNT POP	PROP CODE	INSTITUTION SPCRT NAME
CITY COLLEGE OF NEW YORK	NEW YORK, NEW YORK 10031	18	20654	33-013	CITY COLLEGE OF N Y
CITY UNIV OF NY - GRAD SCHOOL & UNIV CEN	NEW YORK, NEW YORK 10036	18	2723	33-014	CITY U N Y-GRAD SCHL
CLARKSON COLLEGE OF TECHNOLOGY	POTSDAM, NEW YORK 12676	30	2485	33-007	CLARKSON COL OF TECH
COLUMBIA UNIVERSITY	NEW YORK, NEW YORK 10027	20	15432	33-008	COLUMBIA UNIVERSITY
CORNELL UNIVERSITY	ITHACA, NY 14853	27	9505	33-010	CORNELL UNIVERSITY
CORNELL UNIVERSITY - MEDICAL CENTER	NEW YORK, NY 10021	17	740	33-010	CORNELL UNIV-MED CTR
D'YOUNVILLE COLLEGE	BUFFALO, NEW YORK 14201	1086	1086	33-131	D'YOUNVILLE COLLEGE
DOWLING COLLEGE	OAKDALE LG ISLD, NEW YORK 11769	02	1647	33-181	DOWLING COLLEGE
FORDHAM UNIVERSITY	BRONX, NEW YORK 10458	10	14297	33-012	FORDHAM UNIVERSITY
HAMILTON COLLEGE	CLINTON, NEW YORK 13323	31	970	33-192	HAMILTON COLLEGE
HOFSTRA UNIVERSITY	HEMPSTEAD, L. I., NEW YORK 11550	05	12381	33-209	HOFSTRA UNIVERSITY
HUNTER COLLEGE	NEW YORK, NY 10021	17	24550	33-209	HUNTER COLLEGE
ITHACA COLLEGE	ITHACA, NEW YORK 14850	4136	4136	33-151	ITHACA COLLEGE
LONG ISLAND UNIVERSITY	GREENVALE, NEW YORK 11548	04	10093	33-151	LONG ISLAND UNIV
MANHATTAN COLLEGE	BRONX, NEW YORK 10471	4285	4285	33-149	MANHATTAN COLLEGE
MARIST COLLEGE	POUGHKEEPSIE, NY 12501	25	1911	33-202	MARIST COLLEGE
MT SINAI SCH OF MED OF THE CUNY	NEW YORK, NEW YORK 10029	19	192	33-202	MT SINAI SCH OF MED
NEW SCHOOL FOR SOCIAL RESEARCH	NEW YORK, NEW YORK 10011	3345	3345	33-230	NEW SCHL-SOCIAL RES
NEW YORK INSTITUTE OF TECHNOLOGY	OLD WESTBURY, NEW YORK 11568	04	3133	33-230	NEW YORK INST TECH
NEW YORK MEDICAL COLLEGE	NEW YORK, NEW YORK 10029	19	731	33-145	NEW YORK MEDICAL COL
NEW YORK UNIVERSITY	NEW YORK, NEW YORK 10003	18	28543	33-016	NEW YORK UNIVERSITY
POLYTECHNIC INSTITUTE OF NEW YORK	BROOKLYN, NEW YORK 11201	14	4477	33-006	POLY INST OF NY
PRAIRIE INSTITUTE	BROOKLYN, NEW YORK 11205	14	4411	33-017	PRAIRIE INSTITUTE
QUEENS COLLEGE	FLUSHING, NEW YORK 11367	08	28688	33-176	QUEENS COLLEGE
ROCHESTER POLYTECHNIC INSTITUTE	TROY, NEW YORK 12181	29	4679	33-018	ROCHESTER INST TECH
ROCHESTER INSTITUTE OF TECHNOLOGY	ROCHESTER, NEW YORK 14623	34	6362	33-018	ROCHESTER INST TECH
ROCKEFELLER UNIVERSITY	NEW YORK, NEW YORK 10021	17	104	33-174	ROCKEFELLER UNIV
SAINTE FRANCIS COLLEGE - NEW YORK	BROOKLYN, NEW YORK 11201	12	13626	33-021	ST FRANCIS COL-NY
SAINTE JOHN'S UNIVERSITY	JAMAICA, NEW YORK 11439	30	2511	33-021	ST JOHN'S UNIVERSITY
ST. LAWRENCE UNIVERSITY	CANTON, NY 13617	12	13626	33-021	ST LAWRENCE UNIV
STATE UNIV OF NEW YORK - ALBANY	ALBANY, NEW YORK 12222	30	2511	33-021	STATE UNIV NY-ALBANY
STATE UNIV OF NEW YORK - BINGHAMTON	BINGHAMTON, NEW YORK 13901	28	14731	33-182	STATE UNIV NY-BINGHAMTN
STATE UNIV OF NEW YORK - BUFFALO	BUFFALO, NY 14214	37	8756	33-188	STATE U NY-BUFFAL
STATE UNIV OF NEW YORK - STONY BROOK	STONY BROOK, NY 11794	01	12134	33-015	STATE U NY-STONY BRK
STATE UNIV OF NEW YORK - DOWNSTATE MED CTR	BROOKLYN, NEW YORK 11203	16	1386	33-201	ST U NY-DNST MED CTR
STATE UNIV OF NEW YORK - UPSTATE MED CTR	SYRACUSE, NEW YORK 13210	33	954	33-203	ST U NY-UPST MED CTR
STATE UNIV OF NEW YORK A&T COL - ALFRED	ALFRED, NEW YORK 14802	33	4057	33-187	STATE U NY-A&T-ALFRD
STATE UNIV OF NEW YORK COL - BROCKPORT	BROCKPORT, NEW YORK 14420	10250	10250	33-221	ST U NY COL-BROCKPRT
STATE UNIV OF NEW YORK COL - FREDONIA	FREDONIA, NEW YORK 14063	5232	5232	33-225	ST U NY COL-FREDONIA
STATE UNIV OF NEW YORK COL - GENESEO	GENESEO, NEW YORK 14454	6373	6373	33-219	ST U NY COL-GENESE0
STATE UNIV OF NEW YORK COL - PLATTSBURGH	PLATTSBURGH, NEW YORK 12901	35	5708	33-219	ST U NY COL-PLATTSBG
STATE UNIV OF NEW YORK COLLEGE - PURCHASE	PURCHASE, NY 10577	24	2285	33-022	ST U NY COL-PURCHASE
SYRACUSE UNIVERSITY	SYRACUSE, NEW YORK 13210	32	15265	33-022	SYRACUSE UNIVERSITY
UNION COLLEGE	SCHENECTADY, NEW YORK 12308	28	3040	33-032	UNION COLLEGE
UNIVERSITY OF ROCHESTER	ROCHESTER, NY 14627	34	8418	33-019	UNIV OF ROCHESTER
UTICA COLLEGE	UTICA, NY 13502	31	2678	33-019	UTICA COLLEGE
VASSAR COLLEGE	POUGHKEEPSIE, NEW YORK 12601	25	2331	33-111	VASSAR COLLEGE

distributed independently of Part I. Part I is primarily for internal OUA use.

The data for Parts I and II are presented in two different formats or sort sequences as follows: The first sort arrays the data alphabetically by state and the second sort presents the data alphabetically by alpha code. The second format includes only universities which have ever received money.

B. Generation of the UNILIST Report

1. Preparation of the Request Form

The report is a compilation of names and addresses of university presidents, research contacts and business managers. It is produced as either a standard printout or as mailing labels. Requesting this report requires completion of the section of the Report Control Form pertaining to the Unilist as shown below.

ALL REPORTS

As-of-Date  /  /   
Run Date  /  /

UNIVERSITY REPORTS (UNICODE/UNILIST)

UNICODE

1. Regular Run

UNILIST

Report Type: (Check One)

1. List

2. Mailing Labels

Several options are available to specify and limit the content of the generated UNILIST as follows:

<u>Option</u>	<u>Description</u>
● Report Type	This option must be specified. Only one can be checked. The List option produces the formal report (printout) of mailing addresses. The Mailing Labels option results in both the printout and the actual labels.

**UNILIST**

Report Type: (Check One)

- 1. List
- 2. Mailing Labels

(The printout provides OUA with a record of a mailing. In addition, error explanations not shown on the labels may be listed in the printout.)

● Addressee Type	Only one must be selected. Presidents, Research Coordinators, Business Managers or Special Input. This last type allows the user to specify different addressees by entering an appropriate title or division, e.g., University Treasurer or Department of Engineering. In addition, if the Special Input option is selected, but the name and title lines are left blank, the listing and/or mailing labels will provide a general university listing.
------------------	---

Addressee: (Check One)

- 1. Presidents
- 2. Research Coordinators
- 3. Business Officers
- 4. Special Input

Special Name:


Special Title:


- Status Selection Option      The user can further specify or limit the list content by selection of one of the criteria as follows:

(1) All Addresses -- Report will include all entries in the URF for the designated report and addressee type.

(2) Active or Active FY Only -- If a specific FY is entered, the generated UNILIST will only contain universities considered to be active during that FY. (A university only needs one active status in the University Reference File.) By entering an "X" for option 2. but omitting specification of a FY, a list will be generated containing all universities which have had an active contract at any time. Normally, this type of listing would not be desired. //

Status Selection Option

- 1. All Addresses
- 2. Active or Active FY  Only
- 3. Obligation or Obligation FY  Only
- 4. Mailing List Subscribers Only
- 5. All Universities (Default)

(3) Obligations or Obligations FY  Only -- By entering a specific FY, the generated listing will only contain universities with obligated funds during that year. Using an "X" for the option, with no year entered, will result in a list of universities having obligated funds at any time. This option would eliminate universities which are still regarded as active although no funds have been obligated during the FY.

(4) Mailing List Subscribers Only -- The URF contains some non-university entries for the sole purpose of inclusion on the OUA mailing list. This option produces a report containing only these entries.

(5) All Universities -- This is a default feature, i.e., by selecting none of the above options for status, all the universities in the URF will be listed. This is the most frequently used option.

● Type-of-institution Option

This is the final selection criteria available. It would be if "all addresses" or "mailing list subscribers only" was indicated for the status selection option. Otherwise, one of three criteria may be indicated: (1) Foreign Universities only. (2) Foreign and Domestic Universities or (3) Domestic Only. The last option is a default feature which will produce a list of domestic universities only. No entry for Type-of-Institution is required for the default to operate.

Type of Institution Option

1. Foreign
2. Foreign and Domestic
3. Domestic Only (Default)

## 2. Output Generated

### UNILIST Standard Report

The standard report (printout) will contain the mailing addresses and phone numbers specified in the Report Control Form listing universities alphabetically by state. (An example of this report is shown as Figure 61.) In addition, other data are provided for internal OUA control purpose, i.e., the OUA code, institution type code, the short form of the university name, and the input card ID associated with each line of the address. The card ID relates to the following material:

<u>Card ID</u>	<u>Data</u>
22	President's Name
23	President's Title
24	Business Manager's Name
25	Business Manager's Title
26	Research Coordinator's Name
27	Research Coordinator's Title
28	University Name
29-31	Address Lines

It should be noted that lines 28-31 will be used in a listing irregardless of what appears on the first two lines, i.e., presidents' names, special input, etc. Therefore, it is not possible to input additional address data such as business office box numbers or department names.

The card ID's are provided to assist in preparing error corrections using Transcript 4 which requires the appropriate card ID for each line entry.

OFFICE OF UNIVERSITY AFFAIRS  
MANAGEMENT INFORMATION SYSTEM

BUZ71201

04/09/77

LIST NO. 1

AS OF FEBRUARY 28, 1977

CUA CODE	INST TYPE	UNIVERSITY PRESIDENTS	CARD ID	UNIVERSITY SHORT NAME
05501000	PN	DR. MARTHA PETERSON PRESIDENT BELOIT COLLEGE BELOIT, WISCONSIN 53511	22 23 28 30 31	BELOIT COLLEGE
05501500	PN	DR. THOMAS S. SMITH PRESIDENT LAWRENCE UNIVERSITY APPLETON, WISCONSIN 54911	22 23 28 29 30 31	LAWRENCE UNIVERSITY
05502700	PD	REVEREND JOHN P. RAYNOR, S. J. PRESIDENT MARQUETTE UNIVERSITY MILWAUKEE, WISCONSIN 53233	22 23 28 29 30 31	MARQUETTE UNIVERSITY
05504800	GS	DR. EDWARD W. WEIDNER CHANCELLOR UNIVERSITY OF WISCONSIN - GREEN BAY GREEN BAY, WISCONSIN 54302	22 23 28 29 30 31	UNIV WISC-GREEN BAY
05505010	GS	DR. H. EDWIN YOUNG CHANCELLOR UNIVERSITY OF WISCONSIN - MADISON MADISON, WISCONSIN 53706	22 23 28 29 30 31	UNIV WISC-MADISON
05505500	GS	DR. BERNER A. BAUM CHANCELLOR UNIVERSITY OF WISCONSIN - MILWAUKEE MILWAUKEE, WISCONSIN 53201	22 23 28 29 30 31	UNIV WISC-MILWAUKEE

Figure 61.

The report also contains a list number for identifying the options used on the run producing the report. This information appears on line four of the header data. The three digits available are defined from left to right as the addressee option, the status selection option, and the type-of-institution option. If the fiscal year option associated with the status selection options 2 or 3 are used, the specified year is printed to the right of the list number. From left to right, the digits have the following meaning:

Position 1--Addressee Option

- 1--Presidents
- 2--Research Coordinators
- 3--Business Officers
- 4--Special Input

Position 2--Status Selection Option

- 1--All addresses
- 2--Active Option
- 3--Obligation Option
- 4--Mailing List Subscribers Only
- 5--All Universities

Position 3--Type-of-Institution Option

- 1--Foreign Only
- 2--Foreign and Domestic
- 3--Domestic Only

If "all addresses" or "mailing list subscribers only" is the status selection option, the type-of-institution option is not meaningful, and the list number is composed of two digits only.



Errors detected during processing are high-lighted in the right margin of the report. Errors indicated are missing names, titles and address information. Only line 29 of the address lines is checked. Thus, if the address is started on the wrong line, it could be shown as missing.

A summary page is provided for rapid determination of report acceptability. The following counts are provided:

- Records selected
- Records selected with names
- Records selected with titles
- Records selected with university names
- Records selected with university addresses

A glance at these counts will reveal if a significant amount of data is missing. All counters should be equal if no data is missing.

#### Mailing Labels

Prior to the generation of the actual mailing labels, a printout is produced which shows the format of the names and addresses enclosed in asterisks. The presence of the asterisks indicates that the name and address are within the 43 characters allowed. If an asterisk is missing it indicates that the name or address will be truncated on the label as it

exceeds the 43-character limit. This printout can be used to highlight errors and allow for corrections prior to generation of the actual labels. An example of a test label is shown below. The actual mailing addresses are reproduced on standard 4 x 1½ inch labels.

C. Generation of the Formal Greenbook Report

The Greenbook is an annual report. It provides a detailed description of individual contracts by university. Cross-indexed by grant/contract number, field of science, and technical officer location, it provides the user with reference material needed to answer widely varied questions from other agencies, Congress and private sources. Other agencies use the Greenbook to assist them in determining which university should perform similar work for them and to determine what types of work are being performed.

The report capability provides a formal computer report by State, institution and contract sequence, with variation on grant/contract selection. A data file for formal publication may be produced through a photocomposition system.

1. Preparation of the Request Form

Input preparation for this report consists of the completion of the OUA-MIS Report Control Form (RCF). The sections to be completed are illustrated

in the text below. There are four major options (items 1 through 4 on the RCF) which are mutually exclusive. Items 5 through 11 are used as selection criteria. Choice of option is indicated by placing an "X" in the space to the left of the appropriate statement.

The as-of-date and the run date can be entered in the upper-left corner of the RCF as shown below:

ALL REPORTS

As-of-Date	<input type="text"/>
Run Date	<input type="text"/>

The as-of-date must be specified and should be the current month's last day as only the most current file can be used to generate the report. The run date can be supplied but if left blank the actual date the run is processed will be used.

The first Greenbook option is the tape option illustrated below.

NASA's UNIVERSITY PROGRAM (GREENBOOK)

1. Tape for Publication

The request for a tape for publication is submitted at least once a year following the end of the fiscal year. A test tape is produced in August.

The second option, Standard Report, produces the standard Greenbook Report, in which all installations with both active and completed contracts are displayed by State, institution and contract number.

## Internal Reports

### 2. Standard Report

This option should be run with the selection option 5., Active, (discussed below) prior to producing the tape for publication. The report will be the same as that for publication.

The Greenbook installation option (option 3.) is shown below:

### 3. Installation Reports

- 3A. Ames Research Center
- 3B. Flight Research Center
- 3C. Goddard Space Flight Center
- 3D. Kennedy Space Center
- 3E. Langley Research Center
- 3F. Lewis Research Center
- 3G. Marshall Space Flight Center
- 3H. Johnson Space Center
- 3I. Wallops Station
- 3J. NASA Headquarters

With this option, data to be included in the standard report are selected on the basis of either the primary or secondary technical officer being at the listed installation. If the major option, installation reports, is checked, reports are produced for installations 3A through 3J. If reports are desired for particular installations, they are requested by placing an X opposite each appropriate

installation. (Contracts are selected for report inclusion based on the technical officer's location, not on funding data.)

There are sort keys associated with each installation (technical officer location) which are used to produce reports in a sequence useful to OUA. These sort keys are hard coded in the Ancillary Reference File and the sequencing of data is an internal system process. (For a discussion of sort keys see pages 95 - 98.)

The fourth option, the Greenbook program office option is illustrated below:

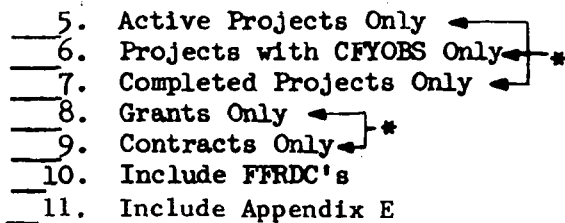
- 4. Program Office Reports
  - 4A. OA
  - 4B. OAST
  - 4C. OSS
  - 4D. OMSF
  - 4E. Staff Offices
  - 4F. OUA

This option produces the standard Greenbook report with data selected as a function of Headquarter's program offices. If the major option, program office reports, is indicated, reports are produced for program offices 4A through 4F. If a report is desired for a particular office, it is requested by placing an X opposite the particular office.

Data are included for a particular report as a function of a sort key associated with the program office. These are the same sort keys discussed relative to the installation reports. The sort keys are hardcoded and stored in Table 08 of the Ancillary Reference File.

The preceding Greenbook options (1-4) specify the top level in a hierarchical data selection process. The sublevels of the data selection process are defined by the internal report condition options, (5-10).

Internal Report Condition Options

- 5. Active Projects Only
  - 6. Projects with CFYOBS Only
  - 7. Completed Projects Only
  - 8. Grants Only
  - 9. Contracts Only
  - 10. Include FFRDC's
  - 11. Include Appendix E
- 

Options 5, 6 and 7 are mutually exclusive; only one can be selected. The options are explained as follows:

- Active--This option causes those contracts with a status code of 1 to be selected.
- CFY Obligation--This option causes those contracts with current fiscal year obligations to be selected.

- Complete--This option causes those contracts with a status code of 3 to be selected.
- No Selection--If project status limitation is not checked, status is not used in the selection process, and projects are listed regardless of status.

Only one option may be indicated for the type-of-agreement limitation options, (8-9). These options have the following selections:

- Grants Only--Only grants are selected. Grants are determined by the prefix of the grant number equal to NGF, NGL, NGR, NGT, or NSG.
- Contracts Only--Contracts that do not have the prefix defined for grants are included (i.e., NAS, NCA, etc.)
- No Selection--If type-of-agreement limitation is not checked, it is not considered in the selection process, and projects are listed regardless of type.

For the FFRDC option, standard procedure is to not include those grants/contracts flagged as being associated with Federally funded research and development centers. If the option is checked, they are included. This selection criteria is processed prior to the project status limitation and type-of-agreement limitation. (It would be rare to use this option.)

The last option, "Include Appendix E," allows for the production of a complete alphabetical listing of all the Principal Investigators and Technical Officers.

## 2. Output Generated

Greenbook processing results in two basic outputs: a Greenbook data file, and the computer-printed Greenbook reports.

The file, produced on magnetic tape, contains all data necessary for publication of the Greenbook report. The file is processed through the Scientific and Technical Information Modular System (STIMS), the NASA Online Input and Photocomposition System (NOIPS), and the Photon 713 at the STID facility. Camera-ready copy results from this process. Arrangements for printing this material are made by OUA. The tape is fixed output. There is no relationship between the tape and the reports as the selection options discussed above only apply to printed output.

The computer-printed Greenbook reports use one standard format, as shown in Figure 62. Variations of the contracts to be included result from the options indicated by the user. These variations are identifiable by changes in the title of each report variation. Each individual report is displayed by location, institution, and contract. For each contract included, the following data elements are printed:



OUA MANAGEMENT INFORMATION SYSTEM  
 ALL INSTALLATIONS  
 ALL GRANTS AND CONTRACTS

CONTRACT OR GRANT NUM	START MO-DA-YR	END MO-DA-YR	CURRENT FY OBLIGATIONS	CUMULATIVE OBLIGATIONS	STA-TUS	PRINCIPAL INVESTIGATOR	TECHNICAL OFFICER	TECH OFFICE	CASE FLD	ACC NUM
CALIFORNIA (CONTINUED)										
UNIVERSITY OF CALIFORNIA - SAN FRANCISCO (CONTINUED)										
NCA 2-665707	03/01/77	02/28/78	5,500	5,500	1	E CARLSSON	H SANDLER E P MCCUTCHEON	ARC ARC	53 11	2712
QUANTITATIVE MEASUREMENT OF RIGHT AND LEFT VENTRICULAR CHAMBER GEOMETRY USING RADIOOPAQUE ENDOCARDIAL MARKERS										
NCA 2-665708	03/01/77	02/28/78	6,000	6,000	1	S A GLANTZ J TYBERG	H SANDLER E MCCUTCHEON	ARC ARC	53 11	2713
QUANTITATIVE DETERMINATION OF DIASTOLIC LEFT VENTRICULAR PROPERTIES										
NGL 05-025-014	05/17/72	04/30/76	187,903	187,903	3	W STOECKENIUS	L P ZILL R S YOUNG	ARC HO-SL	59 11	2714
STRUCTURE AND FUNCTION OF THE PURPLE MEMBRANE OF HALOBACTERIUM HALOBIIUM										
NGR 05-025-001	06/22/64	10/01/67	121,696	121,696	3	H J RALSTON	UNAVAILABLE	ARC	51 12	2715
RELATIVE ROLES OF GRAVITATIONAL AND INERTIAL WORK IN THE ENERGY COST AND CHARACTER OF HUMAN LOCOMOTION										
NGR 05-025-007	05/27/68	07/31/73	296,786	296,786	3	L E EARLEY	M M JACKSON G W HOFFLER	JSC JSC	52 11	2716
THE ROLE OF SYSTEMIC AND RENAL HEMODYNAMICS AS DETERMINANTS OF SODIUM EXCRETION AND VOLUME REGULATIONS										
NGR 05-025-008	09/01/68	06/01/74	174,582	174,582	3	H I MAIBACH	A D MANDEL	ARC	52 12	2717
MICROBIAL ECOLOGY OF ANTERIOR NARES OF MAN.										
NSG 7151	07/01/75	09/30/77	55,720	119,620	1	W STOECKENIUS R A BOGOMOLNI L O ZIER	R S YOUNG	HO-SB	51 11	2718
LIGHT ENERGY CONVERSION IN HALOBACTERIUM										

Figure 62.

- University name (long form)
- Start date
- End date
- Current fiscal year obligations
- Cumulative obligations
- Status
- Principal investigator
- Technical officer
- Technical officer's location
- CASE field of study code
- CASE objective
- Project title or description

Four appendixes for cross-reference, produced along with each standard report, are listed below and illustrated in Figures

- Appendix A--Cross-index by Grant/Contract
- Appendix B--Cross-index by Field of Science and Engineering
- Appendix C--Cross-index by Technical Officer Location
- Appendix D--This is not currently in use. Prior to 1975 the Greenbooks contained a cross-index by RTOP numbers
- Appendix E--Alphabetical Listing of all Principal Investigators and Technical Officers

D. Generation of the Ames Obligation Report

The Ames Obligation Report option is used to produce two types of reports: current fiscal year obligations

and cumulative obligations. Each report consists of eight tables. These tables contain the same dollar information but they are sorted according to the following types of report requirements:

- Standard U.S. region
- Cognizant program office and division
- Standard U.S. region and State
- Type of support, location, and institution
- Institution and unique project
- Funding organizational element and institution
- Funding installation and unique project
- Unique project and funding installation.

1. Preparation of the Request Form

Specifying this report requires the completion of that part of the RCF illustrated below. The as-of-date must be specified. The run date may be specified.

**AMES OBLIGATION REPORT OPTIONS**

- 1. Cumulative Reports
- 2. Fiscal Year Reports

The report type must be specified. Alternatives are explained as follows:

- Cumulative Reports Only--This specification causes the system to produce the report in cumulative mode only.
- Fiscal Year Reports Only--This option produces the current fiscal year reports only.

## 2. Output Generated

The two reports, each consisting of eight Tables, are sequentially numbered as follows: cumulative obligation report tables are identified as Table I through VIII; the current fiscal year report consists of Tables XI through XVIII. An example of one set of the current fiscal year tables is shown as Figures 63 through 70.

Due to the complexity of these reports, they must be continually under review for possible problems. As the most "data sensitive" reports in the system, they are an excellent vehicle for verifying correct system operation in the critical obligations area. Some potential problems known from experience are discussed below.

## 3. OUA Internal Procedures

### a. Troubleshooting the Tables

Location of errors in the tables is simplified by the interrelationship of the tables (i.e., an error in one table usually causes other tables to be in error). Although an error in one table leads to errors in others, it is not possible to predict whether errors in the other tables will be visible. By finding the related errors in all of their various locations, enough

GEOGRAPHICAL DISTRIBUTION OF NASA OBLIGATIONS  
TO EDUCATIONAL INSTITUTIONS BY STANDARD U.S. REGION

FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

REGION	PROJECT RESEARCH	UNIV. RES. & APPLICATIONS	TOTALS
NEW ENGLAND	12,603,691	600,000	13,203,691
MIDDLE ATLANTIC	11,774,494	143,580	11,918,074
EAST NORTH CENTRAL	13,809,171	700,494	14,509,665
WEST NORTH CENTRAL	6,607,360	260,001	6,867,361
SOUTH ATLANTIC	11,940,290	1,434,803	13,375,093
EAST SOUTH CENTRAL	2,431,500	649,080	3,080,580
WEST SOUTH CENTRAL	8,403,788	807,528	9,211,316
MOUNTAIN	11,335,143	461,094	11,796,237
PACIFIC	33,917,652	971,779	34,889,431
GRAND TOTALS	112,823,095	6,028,365	118,851,460

Figure 63.

## FISCAL YEAR 1976 THROUGH JUNE 30, 1976

## IN THOUSANDS OF DOLLARS

COGNIZANT PROGRAM OFFICE AND DIVISION	OBLIGATED FROM HDQRS	OBLIGATED FROM FIELD	DIVISION TOTALS
<b>DA</b>			
APPLICATIONS- STUDIES -	44.1	964.1	1,008.2
COMMUNICATIONS PGM - EC	185.9	1,137.6	1,323.5
SPECIAL PROGRAMS - ES	120.0	1,859.8	1,979.8
EARTH OBSERVATIONS - ER	205.0	9,491.5	9,696.5
TOTAL DA	555.0	13,453.0	14,008.0
<b>DAST</b>			
DAST GENERAL-COG 701 - R	37.5	477.3	514.8
TECHNOLOGY-COG 702 - RD	33.1	10,154.1	10,187.2
PROGRAMS-COG 704 - RD	771.8	6,665.1	7,436.9
MATERIALS & STRUCT - RW	.3	.0	.3
AERO & VEHICLE SYS - RA	.0	382.9	382.9
RES & INSTITUTL MGMT - RM	.0	10.0	10.0
TOTAL DAST	842.7	17,689.4	18,532.1
<b>DSS</b>			
UPPER ATMOSPHERIC - SU	.0	527.6	527.6
APOLLO LUNAR PROGRAM - SM	5,800.3	6,145.2	11,945.5
LIFE SCIENCES - SB	2,359.8	4,761.7	7,121.5
LUNAR & PLANETARY - SL	10,733.8	7,132.8	17,866.6
ASTROPHYSICS - SA	8,146.5	19,398.2	27,544.7
SOLAR TERRESTRIAL - ST	2,442.4	4,795.4	7,237.8
PROG REVIEW & RES MG - SP	.0	51.2	51.2
TOTAL DSS	29,482.8	42,812.1	72,294.9
<b>OSF</b>			
SPACE SHUTTLE - MH	.0	879.8	879.8
APOLLO/SOYUZ PROJ - MA	.0	163.6	163.6
EXPENDABLE VEHICLES - MV	.0	320.0	320.0
SKYLAB - ML	.0	170.0	170.0

Figure 64.

FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

REGION AND STATE	PROJECT RESEARCH	UNIV. RES. & APPLICATIONS	TOTALS
WEST SOUTH CENTRAL (CONTINUED)			
-----			
SUB-TOTALS	8,403,788	807,528	9,211,316
MOUNTAIN			
-----			
ARIZONA	2,384,992	100,000	2,484,992
COLORADO	4,751,514	100,000	4,851,514
MONTANA	15,674		15,674
NEVADA	138,437		138,437
NEW MEXICO	1,962,022	61,094	2,023,116
UTAH	565,697	200,000	765,697
WYOMING	1,516,807		1,516,807
SUB-TOTALS	11,335,143	461,094	11,796,237
PACIFIC			
-----			
ALASKA	147,500	100,000	147,500
CALIFORNIA	24,296,256	771,779	25,068,035
HAWAII	7,715,212		7,715,212
OREGON	604,746	100,000	704,746
WASHINGTON	1,253,938		1,253,938
SUB-TOTALS	33,917,652	971,779	34,889,431
GRAND TOTALS	112,823,095	6,028,365	118,851,460

Figure 65.

NASA - OBLIGATIONS TO EDUCATIONAL INSTITUTIONS  
BY TYPE OF SUPPORT, LOCATION AND INSTITUTION

FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

LOCATION, INSTITUTION, AND CONG DISTRICT	PROJECT RESEARCH	UNIV. RES. & INSTITUTION APPLICATIONS	TOTALS
<u>ALABAMA</u>			
ALABAMA A&M UNIV - 05		100,796	100,796
ATHENS COLLEGE - 05	43,912		43,912
AUBURN UNIV-AUBURN - 03	103,638		103,638
TALLADEGA COLLEGE - 03		22,791	22,791
TUSKEGEE INSTITUTE - 03	39,000	25,693	64,693
UNIV ALA-BIRMINGHAM - 06	50,646		50,646
UNIV ALA-HUNTSVILLE - 05	686,310	104,525	790,835
UNIV ALA-TUSCALOOSA - 03	25,150		25,150
<u>ALASKA</u>			
UNIV ALASKA-FAIRBANKS - 01	47,500	100,000	147,500
<u>ARIZONA</u>			
ARIZONA STATE UNIV - 01	187,000		187,000
NORTHERN ARIZONA U - 03	3,000		3,000
UNIV OF ARIZONA - 02	2,194,992	100,000	2,294,992
<u>ARKANSAS</u>			
HARDING COLLEGE - 02	49,300		49,300
UNIV ARKANSAS-FAYETTE - 03	111,067		111,067
UNIV ARKANSAS-LITTLE ROCK - 01	4,306		4,306
UNIV ARKANSAS-MONTICELLO - 04	16,918		16,918
<u>CALIFORNIA</u>			
CALIF INST OF TECH - 22	4,452,690		4,452,690

Figure 66.



FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

UPN FPN	INSTITUTION UNIQUE PROJECT TITLE	OBLIGATIONS	--- INSTITUTION TOTALS --- OBLIGATIONS EXPNDITURES	
<u>BENEDICT COLLEGE</u>				
	INSTITUTION TOTALS		0	21,251
<u>BENNETT COLLEGE-NC</u>				
000	MISCELLANEOUS RESEARCH	7,000		
	INSTITUTION TOTALS		7,000	38,254
<u>BETHUNE-COOKMAN COL</u>				
340	UNIVERSITY RESEARCH & APPLICATIONS	27,658		
	INSTITUTION TOTALS		27,658	0
<u>BISHOP COLLEGE</u>				
340	UNIVERSITY RESEARCH & APPLICATIONS	20,000		
	INSTITUTION TOTALS		20,000	20,000
<u>BOSTON COLLEGE</u>				
323	LOW COST MISS SPACRAFT/PAYLOAD PROG	30,210		
385	SOLAR TERRESTRIAL DATA ANALYSIS	30,000		
	INSTITUTION TOTALS		60,210	0
<u>BOSTON UNIVERSITY</u>				
192	PLANETARY BIOLOGY	34,000		
743	SUPERSONIC CRUISE AIRCRAFT RESEARCH	75,321		

Figure 67.

FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

FUNDING ORGANIZATION AND INSTITUTION	INSTITUTION OBLIGATIONS	FUNDING ORG SUB-TOTALS
HQ - OA APPLICATIONS STUDIES -		
UNIV OF CONNECTICUT	1,575	
UNIV OF DENVER	42,500	44,075
HQ - OA COMMUNICATIONS PGM - EC		
CITY COLLEGE OF N Y	185,939	185,939
HQ - OA SPECIAL PROGRAMS - ES		
OHIO STATE UNIV	114,000	
UNIV CALIF-L ANGELES	6,000	120,000
HQ - OA EARTH OBSERVATIONS - ER		
UNIV CALIF-BERKELEY	205,000	205,000
HQ - OAST OAST GENERAL-COG 701 - R		
W VA COL GRAD STUDY	37,543	37,543
HQ - OAST TECHNOLOGY-COG 702 - RD		
CAL STATE U-CHICO	7,000	
CASE WESTERN RESERVE	16,600	
MASS INST OF TECH	2,000	
PRINCETON UNIVERSITY	7,462	33,062
HQ - OAST PROGRAMS-COG 704 - RD		
CASE WESTERN RESERVE	16,600	
MASS INST OF TECH	70,000	
PRINCETON UNIVERSITY	160,000	
RENSSELAER POLY-NY	30,000	

Figure 68.

## FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

UPN FPN	FUNDING INSTALLATION UNIQUE PROJECT TITLE	OBLIGATIONS	INSTALLATION TOTALS
MARSHALL SPACFLT CTR (CONTINUED)			
907	ADVANCED DEVELOPMT /LSS/	45,745	
910	ADVANCED DEVELOPMENT	77,040	
966	APOLLO/SOYUZ TEST PROJECT	32,500	
970	SPACE LIFE SCIENCES	18,230	
975	PAYLOADS	18,343	
977	SPACELAB/CVT	34,000	
983	SPACE SHUTTLE MAIN ENGINE	92,000	
984	SOLID ROCKET BOOSTER	52,575	
989	SYSTEMS MANAGEMNT	92,250	
992	FUNCTIONAL CARRIER ACCOUNT	122	
996	PROGRAM SUPPORT	169,999	8,210,540
NATL SPACE TECH LABS			
644	APPL SYSTEMS ANALYSIS AND STUDIES	35,000	35,000
JOHNSON SPACE CTR			
141	IDENTIFICATION AND DISSEMINATION	25,450	
177	EARTH RESOURCES SURVEY SR&T	2,646,226	
178	LIFE SCIENCES-EARTH RESOURCES SURV	22,000	
179	SPACE PROCESSING	29,623	
185	PLANETARY EXPLORATION SRT SCIENCE	24,250	
188	PHYSICS AND ASTRONOMY SRT	148,157	
195	LUNAR SCIENCE SRT	10,900	
197	STRATOSPHERIC RESEARCH PROGRAM	290,000	
198	UPPER ATMOSPHERIC RESEARCH	200,000	
199	LIFE SCI SR&T	1,228,616	

Figure 69.

FISCAL YEAR 1976 THROUGH JUNE 30, 1976

WHOLE DOLLARS

UPN FPN	UNIQUE PROJECT TITLE FUNDING INSTALLATION	OBLIGATIONS	UNIQUE PROJECT TOTALS
366	ILLIAC REIMBURSABLE SUPPORT -----		
	AMES RESEARCH CENTER	382,888	382,888
369	EXPERIMENT DATA ANALYSIS -----		
	GODDARD SPAC FLT CTR	142,757	
	WALLOPS FLIGHT CTR	134,632	277,389
383	DATA ANALYSIS-LUNAR -----		
	NASA HEADQUARTERS	1,956,662	
	AMES RESEARCH CENTER	27,393	
	LANGLEY RESEARCH CTR	32,041	
	GODDARD SPAC FLT CTR	62,042	
	JOHNSON SPACE CTR	386,467	2,464,605
384	DATA ANALYSIS-PLANETARY -----		
	NASA HEADQUARTERS	291,453	
	AMES RESEARCH CENTER	8,969	
	LANGLEY RESEARCH CTR	14,000	
	GODDARD SPAC FLT CTR	10,000	324,422
385	SOLAR TERRESTRIAL DATA ANALYSIS -----		
	NASA HEADQUARTERS	1,690,864	
	AMES RESEARCH CENTER	10,000	
	LANGLEY RESEARCH CTR	20,000	
	GODDARD SPAC FLT CTR	457,239	
	MARSHALL SPACFLT CTR	85,872	2,263,975

Figure 70.

information is generally obtained to track the problem to the grant or contract involved. The difficulty may then be remedied by appropriate file maintenance. The following section describes the most common types of errors and their probable sources. Unless otherwise noted, comments for Table I are also valid for Table XI, and so on.

All Tables

**Error:** Various totals and subtotals do not cross-check among tables.

**Source:** Possible program error (rare). Consult maintenance programmer.

**Error:** Negative numbers.

**Source:** Adjustment of negative obligation incomplete. High probability of same number showing up on Tables V, VI, VII and VIII. May also appear on II if funding office supports little university work, and on IV if university has little NASA support. If the negative number is one of a paired negative-positive set, the positive member frequently appears somewhere within the same subsection of the table that is in error. Note that pair-type errors net out within each table; hence they do not affect grand totals.

**Error:** English heading shows up with no following dollar entries (blanks), or entries in all columns are zero.

Source: Possible program error (rare).  
Consult maintenance programmer.

Table I

Error: Total appears for "other region".

Source: Region codes missing from record. Names of universities involved may appear under "other" at the end of Table IV. Usually results from first obligation to a school in a foreign country not already on the URF and/or Table 06.

Table II

Error: Grand total is correct but one or more program divisions and their dollars are not shown in the table.

Source: Missing cognizant office on Table 08 in ARF. (Error message was ignored in run 5a.)

Error: Congressional District blank, 00, or wrong.

Source: Missing or incorrect URF entry.

Tables XII, XIII, XV, XVI and XVII Only

Error: Sustaining university programs or COG 370 entries appear.

Source: Positive CFY COG 370 entries identified during Run 4 have not been blanked out.

b. Review of Reports Prior to Publication

Tabular reports for publication should be reviewed thoroughly. A general scan should be made for anything that looks suspicious--for instance, incredibly large or small obligations in relationship to known practices within NASA elements or unique projects. This is an intuitive reading. There are no ground rules. Specific checks are listed below:

Tables I and XI

Header date line must cover proper period. \*

Grand total must be reasonable in light of past history and current funding conditions. \*\*

No negative numbers are allowed. \*\*

"Other" should not appear as a region. \*\*

Tables II and XII

OUA division total must match R&A total on Tables I and XI. \*

Sustaining university program cannot appear in Table XII. \*\*

No negative numbers are allowed. \*\*

There must be at least one nonzero entry for each line of English. \*

Grand total should be the same as on Tables I and XI. \*

\* Report writer program difficulty

\*\* Cannot occur if all run 4 and 5 error messages have been taken care of.

Tables IV and XIV

All Congressional District numbers must be present. (problem with URF)

The same university cannot be listed more than once within the same State. (problem with URF)

Negative obligations are not allowed. \*\*

U.S. totals must agree with Tables I and XI. \*\*

University names followed by zeros in all obligations columns are not permitted. \*

Tables V and XV

Large universities must be spot checked for agreement in obligations between Tables IV and XIV. \*

Negative obligations are not allowed. (Paired negative and positive numbers are also wrong.) \*\*

Total obligations must agree with Tables I and XI. \*

An institution cannot be listed unless it has a dollar figure in at least one column. \*

Tables VI and XVI

Negative numbers are not allowed. \*\*

Totals for major Headquarters divisions must be spot checked against Tables II and XII. \*\*

Grand total must agree with Tables I and XI. \*

A NASA element cannot be listed unless it has at least one university entry. \*

A university name cannot be listed unless it is followed by a nonzero, nonnegative amount. \*



Table VII and XVII

Negative numbers are not allowed. (Paired negative and positive numbers are also wrong.) \*\*

Totals for individual centers must agree with center totals on Tables VI and XVI. \*

Grand total must agree with Tables I and XI. \*

A UPN line cannot be blank or zero in the obligation column. (Failure to input English on transcript 6B.)

Tables VIII and XVIII

Negative numbers are not allowed. \*\*

A UPN cannot be listed unless it is followed by the name of at least one organization. \*

An organization cannot be listed with a negative, zero, or blank obligation amount. \*

Grand total must agree with Tables I and XI. \*

E. Generation of the Ames Special Report

This option is used to process the Ames special report. It provides a selection capability to produce reports at a different level than that of the Ames Obligation Reports. The Ames special report is designed to respond to a variety of queries concerning NASA obligations and disbursements to universities, and provide formatted reports at a level of selection desired and in a sequence appropriate to the immediate requirements.

In order to produce this report, the user must specify the data selection criteria to be used. This is accom-

plished by completing an input transcript and submitting it with the request form. Detailed explanation and instructions for completing the transcript are provided in the NASA Technical Memorandum X-3346, "Special Report Writer: A Flexible Information Management System."

F. Generation of the Case Reports

1. Background

In 1965 the Committee on Academic Science and Engineering (within) the Federal Council for Science and Technology) established the CASE data collection system for the purpose of reporting annually to the Federal Council on Federal obligations to academic institutions and associated Federally Funded Research and Development Centers (FFRCC's). Since 1968 CASE data, as well as data on selected non-profit institutions, have also served as the basis for an annual report to the President and Congress in accordance with Section 3(a)(7) of the NSF Act as amended in August 1968 which directs the Foundation

"...to initiate and maintain a program for the determination of the total amount of money for scientific research, including money allocated for the construction of the facilities wherein such research is conducted, received by each educational institution and appropriate nonprofit organization in the United States, by grant, contract or other arrangement from agencies of the Federal Government, and to report annually thereon to the President and the Congress."

On July 1, 1973, the responsibilities of the National Science Foundation were broadened to include functions previously carried out by the Office of Science and Technology. Among the functions transferred from OST is the responsibility for the maintenance of the reporting system developed by CASE so that the Foundation can continue to fulfill its statutory responsibility to prepare an annual report to the President and Congress as described above.

Relationship of CASE Reports to Federal Funds Survey

It is intended that the concepts and definitions in the case reporting will conform as far as possible with corresponding ones in another important NSF survey, Federal Funds for Research Development, and Other Scientific Activities. The resources office, Code BT, is responsible for preparing the NASA wide "Federal Funds" submission to NSF. The data subset covering university obligations is used directly as provided by the OUA-MIS, (i.e., the CASE Reports).

Relationships to Special Analysis of the Budget  
and NIH Health Manpower Report

Total obligations to universities are required each year by OMB for inclusion in an Appendix to the Special Analysis of the Budget. Both OMB and NIH require separate information on obligations to medical schools. Collection and preparation of this data is embedded in the CASE reporting system.

2. Preparation of the Request Form

The insert below shows that portion of the Report Control Form (RCF) that must be completed to select any of the CASE reports. The as-of date must be specified. The run date may be specified.

C.A.S.E. REPORT

- 1. Medques Report
- 2. Institution/Field-of-Science
- 3. R (Basic/Applied) & D
- 4. NSF Report (6=YY Only)
- 5. Disbursements
- 6. Report Year  (YY or NO)

Options 1 through 4 specify the different CASE reports. Any combination may be defined, i.e., reports can be generated to show CFY obligations, cumulative obligations, CFY Disbursements (Expen-

ditures) or cumulative disbursements. There are some exceptions to this as shown in the summary table below which indicates the allowable combinations that can be requested on the Report Control Form. At least one must be checked.

Option 5 indicates reports using disbursements. If the obligation report is desired, option 5 is ignored. If the expenditure report is desired, option 5 is checked.

Option 6 specifies the report year that will appear in the report title. This mode is associated with reports containing amounts for a given fiscal year (e.g., the year 77 is specified in the blanks.) If the characters "NO" are input, the reports will use cumulative values and the report titles will indicate "CUM".

Report Control Form Options

for CASE Reports

<u>Report Name</u>	<u>Obligations</u>		<u>Disbursements (Expenditures)</u>	
	<u>CFY</u>	<u>CUM</u>	<u>CFY</u>	<u>CUM</u>
Medques Report	Check #1 and enter FY in #6	Of limited value *	Check #1, #5 and enter FY in #6	Of limited value *
Institution	Check #2 and enter FY in #6	Check #2 and enter "NO" in #6	Check #2, #5 and enter FY in #6	Check #2, #5 and enter "NO" in #6
Field-of-Science	Check #2 and enter FY in #6	Check #2 and enter "NO" in #6	Check #2, #5 and enter FY in #6	Check #2, #5 and enter "NO" in #6
Basic/Applied R&D	Check #3 and enter FY in #6	Check #3 and enter "NO" in #6	Check #3, #5 and enter FY in #6	Check #2, #5 and enter "NO" in #6
NSF	Check #4 and enter FY in #6	Illegal	Not in current use *	Illegal

\* See text below for explanation.

There are 20 possible permutations and combinations of CASE reports of which only 16 are useful, as shown above. Cumulative MEDQUES reports have limited value as medical flags are not available on most awards prior to FY 70. The institution and field of science coding for use on the RCF is identical as both of these reports are produced at the same time. They

cannot be run separately. The capability for an NSF-CFY expenditure report is built into the system for possible future use, i.e., a change in requirements by NSF. Under normal circumstances this option would not be run.

The CASE run is from the CDF file which uses the most recent URF. For this reason, CASE should be run immediately following the period being reported on. Subsequent CASE runs may contain errors if the wrong URF is used. It is best to run a spare CASE deck in the event NSF loses the original.

If the end of year CASE reports must be re-run some months later, modify the URF to reflect university names and codes as they existed when the CDRF was created. Run the CASE reports; they re-update the URF. Do this as quickly as possible taking extreme care to avoid any other system runs which may access the temporary "historical" URF.

Item: The CASEOBS-X has a security feature to avoid dire consequences in the event it is accidentally submitted to NSF instead of the CASEOBS deck. An action code of "X" is used in card 1, cc2. This code will not pass NSF edit

causing all OUA input to reject. On the other hand, if NSF requests expenditures modification of their system to accept "X" this would allow NASA to comply immediately. If NSF desires some other action code, programmer assistance is required, as the "X" is hard coded.

### 3. Output Reports Generated

In the following description only the five basic reports in their CFY obligations configuration will be discussed. The others are identical except that "CUM" is substituted for "FYXX" in the header while "X" is used to indicate expenditures, viz., MEDQUES-X, CASEOBS-X.

#### ● Medques Report

This report is prepared in response to a requirement of the Budget Operations Division, Code BT, to prepare an annual report for OMB (Office of Management and Budget) showing actual and estimated future obligations to medical schools. This report, called Medques (short for Medical School Survey Questionnaire), is a specially formatted document showing actual obligations for the past FY and providing space for forecast obligations. It is arranged for direct transmittal to NASA installations for completion and



return to Code BT. An illustration of this report is provided in Figure 71. Only the CFY obligations version is normally produced, although expenditures (MEDQUES-X) is available. The cumulative editions will run, but have no particular present or projected use.

- Institution Report

Data are displayed by grant/contract within institution within State, as shown in the example, Figure 72. In addition, the following data elements are listed:

- Principal investigator's name
- CASE object code (PROJOB)
- CASE field-of-science code (Field Sci/Engr)
- Current FY obligations in thousands of dollars with totals by project, by installation, by state, and in grand total
- A flag if the institution is a medical school (X)
- FICE code of the institution
- Number of NASA grants or contracts for the institution
- Number of NASA grants or contracts for each State

INSTITUTION	GRANT/CCNTR NUMBER	PRINCIPAL INVESTIGATOR	NASA TECHNICAL OFFICER AND LOCATION	OBLIGATIONS FY75	IN THOUSANDS OF DOLLARS FY76 (EST)	OBLIGATIONS FY77 (EST)
RAYLOCK COLL OF MED	NGR44 3057	T A DECKER	R F HAINES ARC	40		
BRUNSWICK UNIVERSITY	NAS 2 6105	M B FELTMAN	L J POLOSKI ARC	0		
CORNELL UNIVERSITY	NGR3E 10179	D J REIS	H SANDLER ARC	43		
CORNELL UNIVERSITY	NAS 2 7655	F S VECEL	W E HARMAKER ARC	0		
EMORY UNIVERSITY	NGL11 1CC9	V F FCFVIC	E M HOLTON ARC	30		
EMORY UNIVERSITY	NGR11 1C45	A A PERACHIO	J E ANLIKER ARC	35		
EMORY UNIVERSITY	NGR11 1C16	G H BCLRNE	D L WINTER ARC	75		
GEORGE WASHINGTON U	NAS 2 6283	G PAPPACK	J V DANELLIS ARC	0		
HARVARD UNIVERSITY	NAS 2 6644	A H TASH-JIAN JR	W A DUNLAP ARC	0		
HARVARD UNIVERSITY	NGR22 7256	A H TASH-JIAN JR	D R YOUNG ARC	20		
HARVARD UNIVERSITY	NGL 9 11C17	E H FATHORNE	H SANDLER ARC	85		
INDIANA U-BLOOMINGTN	NGL15 3077	A M CEPFELS	W R MEHLER ARC	0		
INDIANA U-INDIANAPLS	NAS 2 7527	W ZEPAN	W E HAYMAKER ARC	0		
JOHNS HOPKINS UNIV	NGR21 1111	J V BRADY	R M PATTON ARC	135		
JOHNS HOPKINS UNIV	NGR21 11C7	J D FINDLEY	R M PATTON ARC	0		
PITTSBURGH SCH OF MED	NGR33202C01	A H FLE	G A HARRISON ARC	0		
NEW YORK MEDICAL CCL	NGR33145001	UNAVAILABLE	UNAVAILABLE APC	0		
OHIO STATE UNIV	NAS 2 6634	D L CLARKE	J GYAMA ARC	0		
OHIO STATE UNIV	NAS 2 6792	O J LIM	J GYAMA ARC	0		

Figure 71.

STATE INSTITUTION		PROJECT NO.	PRINCIPAL INVESTIGATOR	PROJ OBU	FIELD SCI/ ENGR	AMOUNT OF OBLIGATION (IN \$1000)	MED SCHL	TECHNICAL OFFICER AND LOCATION	FIN CODE
INSTITUTION TOTALS		3 PROJECTS	A K TREHAN G C DARDEN	11 06	45 19	2 50		S J KATZBERG W D ERICKSON	0037483 0037483
MARY BALDWIN COLLEGE			J O SAWYER	21	21	6		J W CAMPBELL	0037234
INSTITUTION TOTALS		1 PROJECTS				6			
OLD DOMINION UNIV			W L HARRIES	11	13	29		F HOHL	0037283
NSG	1362		A J ZUCKERWAR	11	13	2		H K HOLMES	0037283
NSG	1324		W P CHU	11	31	5		L R MCMASTER	0037283
NSG	1341		A DEEPAK	11	31	44		M P MCCORMICK	0037283
NSG	1252		E C KINDLE	11	31	32		J M RUSSELL III	0037283
NSG	1197		E C KINDLE	11	31	51		F ALLARIO	0037283
NSG	1282		S N TIWARI	21	31	12		H G REICHEL JR	0037283
NSG	1245		F S HARRIS JR	21	39	20		W H FULLER JR	0037283
NSG	1357		J M KUHLMAN	11	41	12		B B GROSS	0037283
NSG	1226		G L GOGLIA	11	41	27		J E HARRIS	0037283
NSG	1370		G L GOGLIA	11	41	10		C E HAMMOND	0037283
NSG	1348		G L GOGLIA	11	41	25		H L BEACH JR	0037283
NSG	1077		G L GOGLIA	11	41	32		J H HEFNER	0037283
NSG	1100		R L ASH	11	41	27		J N HEFNER	0037283
NSG	1177		G L GOGLIA	11	45	31		R F HELLMBAUM	0037283
NSG	1079		P L TCHENG	21	45	22		J S TRIPP	0037283
NSG	1379		M R VARANASI	11	45	42		M C WALLER	0037283
NSG	1230		G L GOGLIA	11	46	27		J N HEFNER	0037283
NAS 1	14193		C Y KUO	21	99	59		C H WHITLOCK	0037283
NSG	1350		R H KIRBY	11	99	27		T K DEMPSEY	0037283
NGT47	3028		G L GOGLIA	02	49	102		C H CARTER	0037283
NGT47	3029		G L GOGLIA	02	49	120		C H CARTER	0037283
INSTITUTION TOTALS		22 PROJECTS				758			
UNIV OF VIRGINIA			S F SINGER	11	11	10		J M ALVAREZ	0037457
NSG	1256		R L BROWN JR	11	21	29		R L BOWLES	0037457
NSG	1335		J K HAVILAND	11	41	50		J A SCHOENSTER	0037457
NGR47	5210		G A MCALPINE	21	45	57		L R SHULTZ	0037457
NSG	1128		I D JACOBSON	11	49	19		W J SNYDER	0037457
NSG	1274		S C PITTIS	11	51	14	X	J OYAMA	0037457
NGR47	5213		A R KULTHAU	11	72	60		R H ROLLINS	0037457
NSG	7265								
INSTITUTION TOTALS		7 PROJECTS				239			
VIRGINIA COMMONWELTH U			B L STUMP	21	12	21		V L BELL	0001047
NGR47	2041								

Figure 72.

- NASA technical officer name
- NASA technical officer location (installation)
- Field of Science Report

This report is essentially the same as the institution report (above), except that it is arranged by CASE field of science and engineering.

Information is presented by grant/contract within each CASE field of science and in a list for each of the following CASE objective fields:

- CASE object code
- CASE field-of-science code
- Institution name
- Principal Investigator
- Current FY obligations in thousands of dollars
- A flag if the institution is a medical school
- State
- OUA code of the institution
- Cognizant office mail code or installation name.

This is the only working report enabling analysis of university support by scientific endeavor. Subtotals are presented for each of the 34 CASE fields of science and for the eight CASE objective fields. Grand totals are provided in each instance. The report is illustrated in Figure 73.

Note that this report and the institution report contain the same number of projects and have the same dollar totals (in thousands).

- R&D (Basic, Applied, Development) Report

The information in the R&D report is identical to that in the first section (R&D, Project Objectives 11, 12, 13) of the field of science report. The format is also identical with one exception: there is an initial primary sort by basic research, applied research, and development. Each of these three sections is clearly noted in the heading as may be seen in Figure 74. Remember that the grand total of the report matches only the total of the R&D section of the field of science report.

- NSF Report

The complete NSF ("CASE") reporting requirement may be found in:

"Instructions and Specifications for Reporting Federal Obligations to Academic and Selected

R-D PROJECT OBJECTIVE BY FIELD OF SCIENCE/ENGINEERING

FIELD & SUBFIELD	OBJ CODE	FIELD CODE	INSTITUTION	PROJECT NUMBER	PRINCIPAL INVESTIGATOR	AMOUNT (\$1000)	MED SCHL	STATE	COG OFF	QUA CODE
	11	31	UNIV OF WASHINGTON	NSG 5039	C B LEOVY	30		WASH	GSFC	05302000
	11	31	UNIV OF WASHINGTON	NSG 7085	C B LEOVY	67		WASH	HO-SL	05302000
	11	31	UNIV WISC-MADISON	NAS 1 14136	J A WEINMAN	265		WISC	LARC	05505010
	11	31	UNIV WISC-MADISON	NAS 2 2813	V E SUOMI	170		WISC	ARC	05505010
	21	31	UNIV WISC-MADISON	NAS 5 21065	V E SUOMI	202		WISC	GSFC	05505010
	11	31	UNIV WISC-MADISON	NAS 5 23706	V E SUOMI	12		WISC	GSFC	05505010
	21	31	UNIV WISC-MADISON	NGR50 2215	V E SUOMI	26		WISC	GSFC	05505010
	11	31	UNIV WISC-MADISON	NSG 5152	D D HOUGHTON	98		WISC	GSFC	05505010
	11	31	UNIV OF WYOMING	NAS 1 13797	T J PEPIN	159		WYO	LARC	05600000
	21	31	UNIV OF WYOMING	NAS 1 14373	T J PEPIN	47		WYO	LARC	05600000
	21	31	UNIV OF WYOMING	NAS 2 32067	G VALI	91		WYO	MSFC	05600000
	21	31	UTAH STATE UNIV	NAS 2 8108	A W SHAW	5		UTAH	ARC	04900000
	21	31	UTAH STATE UNIV	NSG 7289	P W BANKS	80		UTAH	HO-ST	04900000
	21	31	VIRGINIA POLY INST	NGL47 4067	H W TIELEMAN	50		VA	WFC	05103700
	11	31	WASHINGTON TECH INST	NCA 5 63	R KASTEN	4		DC	GSFC	01103000
	11	31	YALE UNIVERSITY	NGL 7 4043	R J CROSS JR	44		CONN	HO-SL	00903000

SUB-FIELDS TOTALS 50 INSTITUTIONS 117 PROJECTS 9723 28 STATES

FIELD & SUBFIELD	OBJ CODE	FIELD CODE	INSTITUTION	PROJECT NUMBER	PRINCIPAL INVESTIGATOR	AMOUNT (\$1000)	MED SCHL	STATE	COG OFF	QUA CODE
	21	32	ARIZONA STATE UNIV	NCA 2 35701	D KRINSLEY	4		ARI	ARC	00400000
	11	32	BOSTON UNIVERSITY	NGR22 4025	L MARGULIS	40		MASS	HO-SL	02501000
	11	32	BROWN UNIVERSITY	NGR40 2038	T A WUTCH	90		RI	HO-SL	04400100
	11	32	CALIF INST OF TECH	NGR 5 2303	E M SHOEMAKER	64		CAL	HO-SL	00601500
	11	32	CAL STATE U-HAYWARD	NCA 2290704	D A WARKE	4		CAL	ARC	00001700
	11	32	CHICAGO STATE UNIV	NSG 2188	R L METHOT	19		ILL	ARC	01701600
	21	32	CITY COLLEGE OF N Y	NAS 6 2439	W J PIERSON	20		NY	WFC	03601500
	21	32	COLUMBIA UNIVERSITY	NAS 6 2519	M TALWANI	40		NY	WFC	03602810
	11	32	COLUMBIA UNIVERSITY	NSG 5072	P G SILHAM	12		NY	GSFC	03602810
	11	32	COLUMBIA UNIVERSITY	NSG 5080	K E WEBB	58		NY	GSFC	03602810
	11	32	CORNELL UNIVERSITY	NGR33 10220	C E SAGAN	38		NY	HO-SL	03603100
	11	32	CORNELL UNIVERSITY	NSG 5060	D L TURCOTTE	30		NY	GSFC	03603100

Figure 73.

CUM CASE OBLIGATIONS REPORT

BASIC RESEARCH BY FIELD OF SCIENCE/ENGINEERING

FIELD & SUBFIELD

OBJ CODE	FIELD CODE	INSTITUTION	PROJECT NUMBER	PRINCIPAL INVESTIGATOR	AMOUNT (\$1000)	MED SCHL	STATE	COG OFF	OUA CODE
11	32	UNIV CALIF-DAVIS	NGR 5 4006	C E MCILWAIN	19		CAL	HQ-ST	00614200
11	32	UNIV CALIF-DAVIS	NGR 5 4074	R J BORG	21		CAL	HQ-SM	00614200
11	32	UNIV CALIF-L ANGELES	NAS 5 11674	R L MCPHERRON	609		CAL	GSFC	00614300
11	32	UNIV CALIF-L ANGELES	NAS 9 8096	J T WASSON	149		CAL	JSC	00614300
11	32	UNIV CALIF-L ANGELES	NCA 2390503	P J COLEMAN	6		CAL	ARC	00614300
11	32	UNIV CALIF-L ANGELES	NGL 5 7002	W M KAULA	728		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGL 5 7006	G C KENNEDY	471		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7067	G W WETHERILL	17		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7138	W M KAULA	24		CAL	HQ-ER	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7215	W F LIBBY	145		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7221	I R KAPLAN	394		CAL	HQ-SB	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7273	P J COLEMAN JR	5		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7292	J W SCHOPF	43		CAL	JSC	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7317	G SCHUBERT	84		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7326	G W WETHERILL	1		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7329	J T WASSON	275		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7315	W F LIBBY	25		CAL	JSC	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7351	P J COLEMAN JR	423		CAL	HQ-SL	00614300
11	32	UNIV CALIF-L ANGELES	NGR 5 7407	J W SCHOPF	121		CAL	HQ-SB	00614300
11	32	UNIV CALIF-L ANGELES	NSG 7052	S W KIEFFER	103		CAL	HQ-SL	00614300
11	32	UNIV CALIF-SAN DIEGO	NGL 5 9002	G ARRHENIUS	600		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NGL 5 9004	J R ARNOLD	941		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NGR 5 5005	J R ARNOLD	607		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NGR 5 9013	H C UREY	187		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 9170	K MARTI	40		CAL	HQ-SM	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 97	A SUESS	171		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 98	A SUESS	175		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 303	J C BELSHE	26		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 319	G G GOLES	161		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 323	H C UREY	73		CAL	HQ-SL	00614370
11	32	UNIV CALIF-SAN DIEGO	NSG 5089	T H JORDAN	27		CAL	GSFC	00614370

Figure 74.

Nonprofit Institutions,"

National Science Foundation, Division of  
Science Resource Studies, R&D Economics  
Studies Section, September 1976

The following material summarizes the CASE specifications and describes NASA's compliance with them. Each agency must submit an annual report consisting of two parts: a machine sensible version and a printed version.

Printed Version

Figure 75. illustrates the printed version of the CASE report. The headings are self explanatory. Sort sequence is by NSF-assigned FICE code, which arranges schools almost, but not quite alphabetically by state. (Schools whose names and codes have been changed or added since 1968 tend to fall at the beginning or end of the list or are slightly out of sequence).

The "actual totals" column in whole dollars should be very close to the Table XI grand total in the Ames obligations report. Slight differences may occur as CASE instructions require rounding to zero of amounts less than \$500. This occurs early in the extraction program; hence, small



PROJECT OBJECTIVE SUBTOTALS IN \$1000

FOUNDED

WHOLE DOLLARS

FICE CODE	INSTITUTION	(1) P&D	(2) FELLOW	(3) PLANT	(4) EQUIP	(5) GENL	(6) GTHRSC	(7) OTHER	ACTUAL TOTALS		DIFFERENCE
									INSTIT TOTALS (\$1000)	TOTALS	
0001024	CASE WESTERN RESERVE	109							108938	109	62
0001057	CARNEGIE-MELLON UNIV	37							36977	37	23
0001347	VIRGINIA COMMONWLT U	6							6000	6	
0010025	ALABAMA A&M UNIV	62							62235	62	-235
0010090	AURIJRN UNIV-AUBURN	30							30043	30	-43
0010504	TUSKCEE INSTTUTE	15							15000	15	
0010553	UNIV ALA-HUNTSVILLE	19					56		75300	75	-300
0010637	UNIV ALASKA-FAIRBKS	170							170000	170	
0010819	ARIZONA STATE UNIV	12							12375	12	-375
0010835	UNIV OF ARIZONA	400					32		432698	432	-698
0011015	UNIV ARKANSAS-LTL RK	6							6007	6	-7
0011312	CALIF INST OF TECH	1386							1385927	1386	73
0011387	CAL STATE U-HAYWARD	4							3610	4	390
0011403	CAL STATE U-L ANGLS	30							29500	30	500
0011452	CAL POLY ST U-S LUIS	21							20700	21	300
0011460	CAL STATE U-CHICO	2		26			349		351415	351	-415
0011544	SAN FRAN STATE UNIV	283					3		25652	286	348
0011551	SAN JOSE STATE UNIV	7							284650	286	1350
0011569	CAL ST COL-SONDMA	17							6999	7	1
0011734	POMONA COLLEGE	17							16702	17	298
0012823	SAN JOSE CMTY COL	17							16500	17	500
0013052	STANFORD UNIVERSITY	736		50					784585	786	1415
0013128	UNIV CALIF-BERKELEY	1102							1102628	1102	-628
0013136	UNIV CALIF-DAVIS	2							2400	2	-400
0013144	UNIV CALIF-IPVINE	36							36328	36	-328
0013151	UNIV CALIF-L ANGELES	460							461551	460	-1551
0013177	UNIV CALIF-SAN DIEGO	318							317503	318	497
0013193	UNIV CALIF-SAN FRAN	45							45410	45	-410
0013201	UNIV CALIF-S BAKRAFA	50							50115	50	-115
0013250	UNIV SAN FRANCISCO	93							92710	93	290
0013268	UNIV OF SANTA CLARA	129					18		145936	147	1064
0013284	UNIV OF SOUTHERN CAL	150							149811	150	189
0013508	COLORADO STATE UNIV	196							155209	196	791
0013656	UNIV STHN COLORADO	43							42945	43	55
0013706	UNIV COLORADO-BOLDR	408							406968	408	1032
0013714	UNIV OF DENVER	98							97719	98	281
0013854	FAIRFIELD UNIVERFSITY	15							14996	15	4
0014175	UNIV OF CONNECTICUT	43							160644	161	356
0014266	YALE UNIVERSITY	56					113		55755	56	245
0014316	UNIV OF DELAWARE	11							10700	11	300
0014449	GEORGE WASHINGTON U	366							364074	366	1926
0014480	HOWARD UNIVERSITY	49							49090	49	
0014696	FLORIDA INST OF TECH	45							45218	45	-218
0014803	FLORIDA A&M UNIV	115							114699	115	301
0014894	FLORIDA STATE UNIV	66							56693	66	-693

Figure 75.

amounts are dropped even from the actual totals column. For instance, in FY 76, the CASE report actuals were \$3,705 (dollars) less than the true "actual." "Errors" of this magnitude are normal and within design criteria. Differences on the order of \$15,000-\$75,000 may indicate system malfunction.

Comparison of amounts reported for individual schools (rounded instit totals) and actual totals (dollars) is required by NSF. Obligations consistency is maintained throughout the CASE series of reports by rounding at the individual contract level. Rounded contract amounts are then added to obtain institution totals and a grand total. Use of this technique results in the rounding errors noted in the "Difference" column. The total variance between the rounded figure used by CASE and the actual dollar value generally runs in the \$25,000 to \$75,000 range. In FY 76 it was about \$38K. Too great a variance here, too, indicates a potential system problem. To maintain consistency in obligations reports, particularly in view of these CASE requirements, several points are important:

- The rounded CASE obligations are also used in reporting data for the Special Analysis of the Budget (and to Code BT for use in "Federal Funds.")
- Other published data on NASA's obligations are based on the Ames Obligations Report, i.e., individual totals and subtotals are produced by manual rounding of calculations made in actual dollars.
- CASE data do include foreign obligations.
- Totals in Ames Special Reports (which include foreign obligations) are also in thousands, but use a higher level, i.e., more accurate rounding techniques; hence, there will be slight variations among the CASE totals, Ames Special totals, and Ames Obs totals. However, each of the three totals are correct.

#### Machine Sensible Version

The run request which produces the hard copy NSF report also produces an interpreted card deck. NSF has extensive input edits, all of which are built into the OUA-MIS CASE report writer. Hence, rejection of any submitted input is rare. The

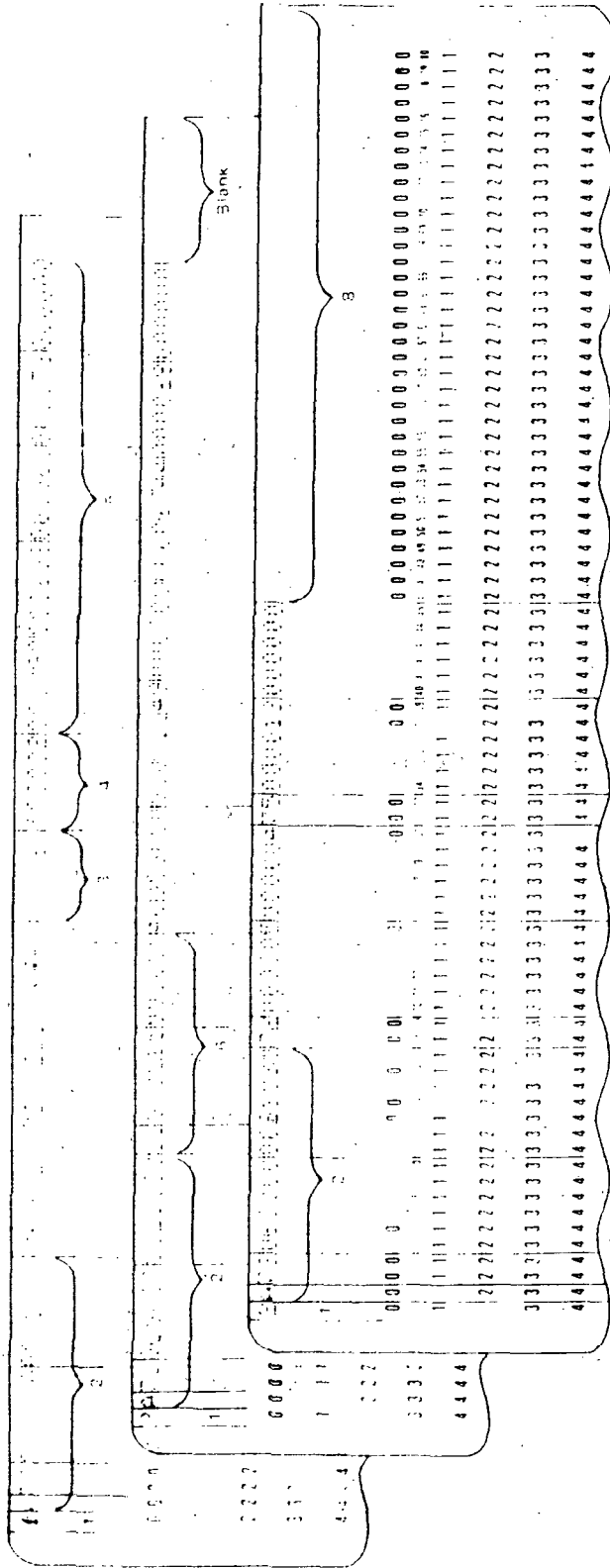
actual cards are illustrated in Figure 76, while detailed field descriptions appear in Figures 77-78. An 80/80 listing of the cards prints out as a part of the previously discussed hard copy report. Case has no provision for changing or deleting records through action codes such as C or D. All action codes are "A", add. Thus if a card is rejected, it is re-submitted as though it had never been entered in the first place. The OUA-MIS does not have the capability of replacing individual cards, unless they are hand-punched. A large number of rejections generally indicates a system failure in which case the entire deck must be re-submitted.

#### 4. OUA Internal Procedures

The annual CASE submission to NSF includes printed reports, a deck of cards and an 80/80 listing of the cards. NSF requests that the box containing the agency punchcard submission should be plainly marked externally with magic marker or other suitable marking so as to provide the following information:

- a. Name of submitting agency
- b. Fiscal year for which submission is being made.

Sample Card-set to Create Record



1. Column 1 must be 1 or 2, depending on card type involved.
2. Columns 2-17 must be identical for all cards of an institution set, with column 2 coded "A."
3. R&D obligations are \$61,440, punched as 00061.
4. Fellowship, traineeship, and training grant obligations are \$31,500, punched as 000032.
5. R&D plant (columns 51-56), facilities and equipment for instruction in the sciences and engineering (columns 57-62), general support for science and engineering (columns 63-68), other science and engineering related activities (columns 69-74), and all other activities (columns 75-80) are in thousands of dollars, with no breakdown by field of science required.
6. Field of science code is followed by two amount fields, both of which must be filled with numerics. For example, for field of science 41, R&D obligations of \$15,000 are punched as 000015, and the "zero" fellowship, traineeship, and training grant obligations are punched as 000000.
7. Columns 74-80 must be blank on card 2, as a maximum of 1 field of science entries are permitted on a single card; 2, 10, and zero-fill.
8. All columns after those pertaining to the last field of science entry are left blank.

**Note:** Obligations totaling less than \$50,000 for any specific activity (e.g., R&D, general support for science and engineering) should be reported as zero (000000) on card 1. In cases where total R&D or fellowship, traineeship, and training grant obligations exceed \$500, but where each field of science is less than \$500, report the entire amount under the field of science receiving the largest amount.

Figure 76

CCData Elements

1 Card Type: A "1" for this card  
2 Action Code "A" for Obligations, "X" for expenditures  
3-4 Fiscal Year Definition  
5-10 Agency Code: 050000 for NASA  
11-17 Institution (FICE) Code  
18-38 20-Character Institution Name  
39-80 Obligations (in \$1000) by CASE Objective  
39-44 R&D  
45-50 Fellowships, Traineeships, and Training Grants  
51-56 R&D Plant  
57-62 Facilities and Equipment  
63-68 General Support Field of Science  
69-74 Other Sciences  
75-80 Other Activities

For a given institution, card type 2 is produced for each related project with obligations in any of the defined CASE fields of science and engineering. The data elements are described by card column position below:

CCData Elements

1 Card Type: A "2" for this card  
2-17 Same as for Card Type 1  
18-31 Field of Science Distribution 1  
18-19 Field of Science Code  
20-25 Obligation R&D

Figure 77. NSF (CASE) Report Field Descriptions

CC(con.)Data Elements(con.)

26-31	Obligation Fellowships and Traineeships
32-45	Field of Science Distribution 2
46-59	Field of Science Distribution 3
60-73	Field of Science Distribution 4
74-80	Blank

Figure 77. NSF (CASE) Report Field Descriptions (cont.)

# Card Formats for Create Records

2

Card type "2"	Agency code	Institution code	Institution name	Obligations (thousands of dollars)						
				R&D	Fellowships, traineeships, & training grants	R&D Plant	Facilities & equipment for instruction	General support for science	Other science	Other activities
1	2 3 4 5 6 7 8 9	10 11 12 13 14 15 16 17	18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	33 34 35 36 37 38	39 40 41 42 43 44	45 46 47 48 49 50	51 52 53 54 55 56	57 58 59 60 61 62 63 64 65 66 67 68	69 70 71 72 73 74	75 76 77 78 79 80

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Card type "2"	Agency code	Institution code	Field of Science			Field of Science			Field of Science			Blank
			FS	Obligations R&D	Obligations Fellowships & traineeships	FS	Obligations R&D	Obligations Fellowships & traineeships	FS	Obligations R&D	Obligations Fellowships & traineeships	
1	2 3 4 5 6 7 8 9	10 11 12 13 14 15 16 17	18 19 20 21 22 23 24 25	26 27 28 29 30 31	32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	62 63 64 65 66 67 68 69 70 71 72 73 74	75 76 77 78 79 80				

Figure 78.



- c. Type of data, i.e., academic data and initial submission or supplemental submission
- d. Total card count for the submission
- e. Sequence number of each box and the total number of boxes submitted, i.e., box 1 of 2

Due date for submission of data is March 15 of each year.

Punchcards and reports with a covering letter or memorandum should be sent to:

J.G. Huckenpahler, Program Analyst  
Universities & Nonprofit Institutions  
Study Group

Division of Science Resources Studies  
National Science Foundation

1800 G Street, N.W.

Washington, D. C. 20550

(Submission name and address subject to change.  
Verify with NSF before mailing.)

Reports destined for OMB or NIH, along with a copy of the submission to NSF (less card deck) is given to NASA's Office of Budget Operations for inclusion in the Agency's total submission.

The remaining variations on the CASE reports are used for internal OUA reference purposes and for preparation of such widely distributed materials as the "FY 76 Summary University Program Information" document. Some fourteen varieties of CASE reports are available, but these are merely variations of four basic types. As previously noted in the Run 5b Contract Data File (CDF) file discussion, CASE reports should be run only with the report cycle for the month represented by the report. Running CASE reports from historical tapes - even if only from the previous month - leads to use of a CDF and URF of different dates. As the age difference between these two files increases, the potential for erroneous data increases. Specifically university name and code changes (OUA, ALPHA, FICE) in the URF will not find a proper match on the original CDF, leading to name and sort errors on the output reports.

G. DANALYST Report

1. Purpose

The Office of University Affairs is engaged in an intensive effort to remedy the problem of late grant and contract renewal. DANALYST is OUA's approach to this problem. It provides the centers

with data on current weaknesses relative to on-time renewal; OJA management with a reference tool to aid them in assisting the development of center compliance; and the management council with documented evidence of progress.

2. Preparation of Request Form

Input preparation consists of completing the as-of and run date parts of the RCF form in the usual fashion. The as-of date is generally the current date; this allows PCF data through the most recent update to be included in the report. The section of the RCF form illustrated below determines the content of the DANALYST report. It must be completed as it selects those contracts for inclusion whose form 1356 obligation date falls in the specified "from-to" range. Normally, an entire fiscal year is specified, as illustrated. If, for example, only the month of February 1977 were desired the dates would be 02-77 in both the "from" and "to" blocks.

**DANALYST REPORT (Dates Inclusive)**

- 1. From Month
- 2. From Year
- 3. To Month
- 4. To Year

**REPORT TITLE**


The DANALYST reports are divided into two groups. Group 1-5 comprises the standard DANALYST reports, while group 6-7 provides a count of grant/contract modifications and an analysis of Form 1356 receipts, generally for the current year to date. The selection period must be completed for either report option. Space is provided for entering the report title. If it is not specified, blanks are used.

### 3. Output Reports Generated Discussion

The DANALYST reports display the actual number of grants and contracts suffering late renewal for a specified time interval. This information is presented in a series of different reports, with several types of statistical analyses and several levels of detail. The following data elements are provided by the reports:

- Grant/contract number
- Modification (amendment number)
- Start date
- Obligation date
- Institution name
- Technical officer location

The reports, identified by table number, are described below.

Table  
Number

General Contents

Actual DANALYST Reports

- IA Summary analysis for all field centers and Headquarters program offices
- IB Summary analysis, by program office (This table is still in the program, but is meaningless since last NASA reorganization. The centers no longer appear since the first position of their sort key was set to zero)
- IIA Detailed analysis for individual field centers
- IIB Detailed analysis for Headquarters, OART
- IIC Detailed analysis for Headquarters, OMSF
- IID Detailed analysis for Headquarters, OSSA
- IIE Detailed analysis for Headquarters, OTDA
- IIF Detailed analysis for Headquarters, miscellaneous offices
- III Listings of individual grants/contracts, including renewal history for each NASA element
- IV Summary analysis of late renewals, by educational institution
- V Listings of individual grants/contracts, including renewal history for each educational institution

Extra 1356 Analyses Tables

- VIA Actual count of received Forms 1356, by installation
- VIB Forms 1356 received, with count limited to one Form 1356 for contracts undergoing multiple amendments

Actual DANALYST Reports

VII Distribution of received Forms 1356 for contracts undergoing multiple amendments.

A few of the reports are illustrated as Figures 79 through 85.

H. RTOP Analysis Report

1. Purpose

The RTOP Analysis Report was designed to the specifications of and produced solely for OAST. It requires no collection of data not already in the OUA data base and is the only OUA-MIS output report at the RTOP level.

It is produced directly from the current ASF file and therefore, can only be run with the production for the current month. "Historical" runs are not possible. The most frequently used report provides OUA CFY values. The second type available substitutes raw CFY values from FACS without the benefit of OUA negative adjustments or any editing. The third variety contains disbursement data. Heading English is automatically supplied in each of the three versions so they are readily distinguishable.

Cumulative values are not available in the

OFFICE OF UNIVERSITY AFFAIRS  
 UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM  
 PROGRAM OFFICES  
 UNIVERSITY GRANTS AND CONTRACTS SUMMARY LATE RENEWAL ANALYSIS  
 TEST RUN OF DANALYST REPORT

NASA ELEMENT	ACTIONS REPORTED ON FORMS 1356	RENEWED ON TIME NUMBER	PERCENT	NUMBER	PERCENT	RENEWED LATE AVER WEEKS LATE	WEEKS LATE RANGE	ACCRUED WEEKS LATE
OA	1	0	0.0	1	100.0	4.0	4.0- 4.0	4
OAST								
HQ		0	0.0	0	0.0		0.0- 0.0	0
SUBTOTALS		0	69.7	0	100.0		0.0- 0.0	0
OMSF								
HQ		0	0.0	0	0.0		0.0- 0.0	0
SUBTOTALS		0	69.7	0	100.0		0.0- 0.0	0
655								
HQ	11	4	36.4	7	63.6	8.5	3.1- 21.1	60
SUBTOTALS	11	4	36.4	7	63.6	8.5	3.1- 21.1	60
OTHER		0	36.4	0	63.6		0.0- 0.0	0
NASA TOTALS	56	39	69.7	17	30.3	6.2	0.7- 21.1	106

Figure 79.

UNIVERSITY GRANTS AND CONTRACTS DETAILED LATE RENEWAL ANALYSIS  
TEST RUN OF DANALYST REPORT

NASA ELEMENT	ACTIONS REPORTED ON FORMS 1356	RENEWED ON TIME		NUMBER	PERCENT	RENEWED LATE		NUMBER	PERCENT	WEEKS LATE RANGE		ACCURED WEEKS LATE
		NUMBER	PERCENT			WEEKS LATE	RANGE					
ARC	4	1	25.0	3	75.0	3.2	2.1- 3.9	9				
GSFC	12	11	91.7	1	8.3	11.4	11.4- 11.4	11				
JSC	9	8	88.9	1	11.1	1.9	1.9- 1.9	1				
KSC	2	2	100.0	0	0.0		0.0- 0.0	0				
LARC	11	11	100.0	0	0.0		0.0- 0.0	0				
LERC	2	1	50.0	1	50.0	.7	0.7- 0.7	0				
MSFC	2	1	50.0	1	50.0	4.0	4.0- 4.0	4				
WFC	2	0	0.0	2	100.0	7.5	3.1- 11.9	15				
<b>TOTALS</b>	<b>44</b>	<b>35</b>	<b>79.6</b>	<b>9</b>	<b>20.4</b>	<b>4.7</b>	<b>0.7- 11.9</b>	<b>42</b>				



DANALYST

RUN DATE 04/16/77

OFFICE OF UNIVERSITY AFFAIRS  
UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM

PAGE 3

TABLE III

UNIVERSITY GRANTS AND CONTRACTS RENEWED LATE  
TEST RUN OF DANALYST REPORT

NASA ELEMENT	EDUCATIONAL INSTITUTION	GRANT/CONTRACT NUMBER	MOD. NUMBER	.... DATES REPORTED START	.... OBLIGATION	WEEKS LATE	RENEWED ON TIME
JSC	BAYLOR COL OF MED	NAS 9 13540	5	09-01-76	08-31-76		X
JSC	BAYLOR COL OF MED	NAS 9 14715	2	09-01-76	08-23-76		X
JSC	CORNELL UNIVERSITY	NGR33 10137	10	10-01-76	08-16-76		X
JSC	PAN AMERICAN UNIV	NSG 9033	1	09-01-76	08-23-76		X
JSC	SO UNIV-BATON ROUGE	NSG 9030	1	09-01-76	08-27-76		X
JSC	TEXAS A&M UNIVERSITY	NAS 9 12434	14	11-01-76	08-30-76		X
JSC	UNIV CALIF-S BARBARA	NAS 9 14816	4	09-02-76	09-15-76	1.9	X
JSC	UNIV HOUSTON-HOUSTON	NAS 9 14534	2	10-01-76	09-29-76		X
JSC	UTAH STATE UNIV	NAS 9 14871	3	10-09-76	08-30-76		X

Figure 81.

EDUCATIONAL INSTITUTION	ACTIONS REPORTED ON FORMS 1356	RENEWED ON TIME NUMBER	PERCENT	NUMBER	PERCENT	RENEWED AVER WEEKS LATE	PERCENT	WEEKS LATE RANGE	ACCRUED WEEKS LATE	NASA ELEMENTS INVOLVLD
UNIV OF ARIZONA	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
CALIF INST OF TECH	2	1	50.0	1	50.0	3.7	3.7	3.7- 3.7	3	2
STANFORD UNIVERSITY	1	0	0.0	1	100.0	2.1	2.1	2.1- 2.1	2	1
UNIV CALIF-BERKELEY	1	0	0.0	1	100.0	3.1	3.1	3.1- 3.1	3	1
UNIV CALIF-SAN DIEGO	2	1	50.0	1	50.0	5.0	5.0	5.0- 5.0	5	2
UNIV CALIF-S BARBARA	1	0	0.0	1	100.0	1.9	1.9	1.9- 1.9	1	1
UNIV OF SOUTHERN CAL	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
FEDERAL CITY COLLEGE	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
GEORGE WASHINGTON U	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
HOWARD UNIVERSITY	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
SAVANNAH STATE COL	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
PURDUE UNIVERSITY	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
WICHITA STATE UNIV	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1
SO UNIV-BATON ROUGE	1	1	100.0	0	0.0	0.0	0.0	0.0- 0.0	1	1

Figure 82.

DANALYST

RUN DATE 04/16/77

OFFICE OF UNIVERSITY AFFAIRS  
UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM  
UNIVERSITY GRANTS AND CONTRACTS RENEWED LATE  
TEST RUN OF DANALYST REPORT

EDUCATIONAL INSTITUTION	GRANT/CONTRACT NUMBER	MOD. NUMBER	--- DATES REPORTED --- START	OBLIGATION	WEEKS LATE	RENEWED ON TIME	NASA ELEMENT
SO UNIV-BATON ROUGE	NSG 9030	01	9- 1-76	8-27-76		X	JSC
UNIV MARYLAND-COL PK	NGR21 2291	11	10- 1-76	9-22-76		X	GSFC
UNIV MARYLAND-COL PK	NGR21 2316	11	10- 1-76	9-21-76		X	GSFC
UNIV MARYLAND-COL PK	NSG 5035	02	12- 1-76	9-29-76		X	GSFC
MASS INST OF TECH	NGL22 9015	17	1- 1-78	9-17-76		X	ST
MASS INST OF TECH	NGL22 9521	06	7- 1-78	9-15-76		X	SL
MASS INST OF TECH	NGL22 9640	05	2- 1-78	9-16-76		X	LARC
MASS INST OF TECH	NGR22 9005	14	7- 1-76	9-17-76	10.9		SB
MASS INST OF TECH	NSG 3076	02	10- 1-76	9-27-76		X	LERC
UNIV MICH-ANN ARBOR	NSG 1243	01	10- 1-76	9-29-76		X	LARC
MISSISSIPPI STATE U	NAS 8 31373	03	11-21-76	9-29-76		X	MSFC
MISSISSIPPI STATE U	NSG 1242	01	10- 1-76	9-20-76		X	LARC
MONTANA STATE UNIV	NGR27 1040	05	9- 1-76	9-23-76	3.1		SA
PRINCETON UNIVERSITY	NGL31 1252	05	2- 1-78	9-28-76		X	LARC
CITY COLLEGE OF N Y	NGL33 13040	09	10- 1-78	9-23-76		X	GSFC

UNN

Figure 83.

DANALYST

RUN DATE 04/16/77

OFFICE OF UNIVERSITY AFFAIRS  
UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM

PAGE 1  
10UMIS00171  
TABLE VIA

TOTAL NUMBER OF FORM 1356 RECEIPTS BY TYPE OF ACTION  
TEST RUN OF DANALYST REPORT

INSTALLATION	NEW AWARD	ADDIT. FUNDS SAME PERIOD	ADDIT. FUNDS AND TIME	NO COST EXTENSIONS	INCREMENTAL FUNDING	TOTALS
ARC	5		4			9
GSFC	13	4	12		6	35
JSC	5	3	9		5	22
KSC	1		2			3
LARC	10	2	11			23
LERC	2		2			4
MSFC	1	1	2			4
WFC	1		2		1	4
HQ	2	1	12			15
TOTALS	40	11	56		12	119

Figure 84.

DANALYST

RUN DATE 04/16/77

OFFICE OF UNIVERSITY AFFAIRS  
UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM  
NUMBER OF PROJECTS WITH AT LEAST ONE FUNDING ACTION  
TEST RUN OF DANALYST REPORT

PAGE 1  
10UMIS00171  
TABLE V1B

INSTALLATION	NEW AWARD	ADDIT. FUNDS SAME PERIOD	ADDIT. FUNDS AND TIME	INCREMENTAL FUNDING	TOTALS
ARC	5		4		9
GSFC	13	4	12	5	34
JSC	5	3	9	5	22
KSC	1		2		3
LARC	10	2	11		23
LERC	2		2		4
MSFC	1	1	2		4
WFC	1		2	1	4
HQ	2	1	12		15
TOTALS	40	11	56	11	118

-324-

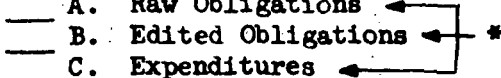
Figure 85.

RTOP report. Neither are funds from other than OAST cognizant offices.

## 2. Preparation of the Request Form

The Report Control Form portion to be completed for the generation of an RTOP report is shown below.

### RTOP ANALYSIS REPORT

1.  A. Raw Obligations
  - B. Edited Obligations
  - C. Expenditures
- 

It should be noted that these options are mutually exclusive. The as-of-date entered on the RCF is always the last day of the month.

## 3. Output Reports Generated

Examples of the three types of RTOP reports are shown as Figures 86, 87, and 88. In addition, an edit report is generated which notes any missing technical descriptions, an indication of a possible Technical Description File or report writer problem or a data input omission.

### I. OSS-DANALYST (Headquarters Renewal Report)

#### 1. Purpose

This is a specialized, little-used report designed by OUA at the request of OSS. It is

AMES RESEARCH CENTER AS OF FEBRUARY 29, 1977

RTOP	INSTITUTION	GRANT/CONTRACT	DESCRIPTION	(\$1,000 \$)
505-06-97	UNIV OF FLORIDA	NSG 2120	INVESTIGATION ON THE FLOW ABOUT GENERAL FUSELAGE SHAPES AT HIGH ANGLES OF ATTACK	59
505-07-10	STANFORD UNIVERSITY	NGL 05-020-007	GUIDANCE AND CONTROL OF FLIGHT VEHICLES	70
505-07-11	MASS INST OF TECH	NGL 22-009-124	CONTROL OPTIMIZATION STABILIZATION AND COMPUTATION OF ALGORITHMS FOR SPACE APPLICATIONS	70
505-07-11	PRINCETON UNIVERSITY	NGR 31-001-277	VTOL MATHEMATICAL MODEL DESIGNS FOR OPTIMAL CONTROL SYSTEMS DESIGNS	36
505-07-11	UNIV OF SANTA CLARA	NGR 05-017-010	EXTENSION OF MITROVICS METHOD FOR THE ANALYSIS AND DESIGN OF DYNAMIC SYSTEMS	25
505-08-21	UNIV CALIF-BERKELEY	NSG 2026	FIRE TESTING OF AIRCRAFT INTERIORS	32
505-08-21	UNIV SAN FRANCISCO	NSG 2039	RESEARCH ON REACTIVE TOXICITY OF PYROLYSIS EFFLUENTS	6
505-08-23	UNIV CALIF-BERKELEY	NSG 2026	FIRE TESTING OF AIRCRAFT INTERIORS	10
505-08-31	SAN JOSE STATE UNIV	NSG 2111	NUCLEAR MAGNETIC RESONANCE STUDY OF OXIDATION OF UNSATURATED ELASTOMERS	16
505-09-00	MASS INST OF TECH	NSG 2118	EXPERIMENTATION IN SUPERVISORY CONTROLS FLIGHT MANAGEMENT	58
505-09-00	OHIO STATE UNIV	NAS 2-8954	A TACTUAL DISPLAY AID FOR PRIMARY FLIGHT TRAINING	65
505-09-00	SAN JOSE STATE UNIV	NGL 05-046-002	ANGULAR ACCELERATION IN MAN	78
505-09-00	STANFORD UNIVERSITY	NCA 2-745710	SIMULATION DEVELOPMENT FOR MULTIPLE WARNING DISPLAY EXPERIMENTATION	17
505-09-00	UNIV CALIF-BERKELEY	NGR 05-003-471	SOCIOLOGICAL ASSESSMENT OF ADVANCED TECHNOLOGY	25
505-09-00	UNIV OF UTAH	NGR 45-003-108	APPLICATIONS OF COMPUTER SPEECH RECOGNITION IN FLIGHT MANAGEMENT	42
505-10-12	UNIV MICH-ANN ARBOR	NSG 2018	GRAD RESEARCH AERONAUTICS PROGRAM	30
505-10-12	UNIV MICH-ANN ARBOR	NSG 2113	IMPROVEMENT OF LIGHT AIRCRAFT PROPULSION EFFICIENCY	115

Figure 86.

RTOP	INSTITUTION	GRANT/CONTRACT	DESCRIPTION	(\$1,000 S)
506-22-43	COLORADO STATE UNIV	NSG 3086	INDUSTRIAL ION SOURCE TECHNOLOGY	50
506-22-43	U MINN-MNPLS-ST PAUL	NSG 3041	ION BEAM SPUTTER ETCH AND DEPOSITION STUDY	35
506-23-17	MASS INST OF TECH	NSG 3017	SILICON SURFACE PHENOMENA RELATED TO ENERGY CONVERSION	44
506-23-17	STATE UNIV NY-ALBANY	NSG 3095	FUNDAMENTALS OF RADIATION TOLERANCE IN SILICON SOLAR CELLS	40
506-23-17	YESHIVA UNIVERSITY	NSG 3123	INVESTIGATION OF THE TOPOGRAPHICAL FEATURES OF SURFACE CARRIER CONCENTRATIONS AND LIFETIME DETERMINATIONS IN SILICON SOLAR CELLS	25
506-23-30	COLORADO STATE UNIV	NSG 3038	PLASMA INTERACTION BETWEEN ION THRUSTER AND SOLAR ARRAY	15
506-23-36	PENN STATE U-UNIV PK	NSG 3097	SURFACE CHARGE KINETICS NEAR METAL-DIELECTRIC INTERFACES EXPOSED TO KILOVOLT ELECTRON FLUX	9
506-25-12	UNIV TEXAS-AUSTIN	NSG 3089	PLASMA FLUCTUATION DIAGNOSTIC TOOL FOR THE BUMPY TORUS EXPERIMENT	30
506-25-21	UNIV CALIF-SAN DIEGO	NSG 3055	CHEMICAL VAPOR DEPOSITION OF HIGH TC SUPERCONDUCTORS	40
506-25-21	UNIV CALIF-SAN DIEGO	NSG 3103	SUPERCONDUCTIVITY IN TERNARY MOLYBDENUM SULFIDES	45
506-25-25	COLORADO STATE UNIV	NGR 06-002-159	BULK PROPERTIES OF ATOMIC TRIPLET HYDROGEN & HIGH PRESSURE EQUATION OF STATE FOR SOLID HYDROGEN	29
506-25-25	CORNELL UNIVERSITY	NGR 33-010-188	ASTROPHYSICAL MATERIAL SCIENCE - THEORY	30
506-25-31	CORNELL UNIVERSITY	NGR 33-010-188	ASTROPHYSICAL MATERIAL SCIENCE - THEORY	11
506-25-41	CORNELL UNIVERSITY	NGR 33-010-188	ASTROPHYSICAL MATERIAL SCIENCE - THEORY	11
506-25-41	DREXEL UNIVERSITY	NSG 3090	THEORY FOR NONLINEAR REACTION-DIFFUSION PHENOMENA WITH APPLICATION TO FREE RADICAL RECOMBINATION	29
506-25-41	UNIV MARYLAND-COL PK	NGR 21-002-400	PRELIMINARY EXPERIMENTS WITH A SPLIT SPHERE HIGH PRESSURE APPARATUS	41

13271

Figure 87.



OUA-MIS BUZ78001

OFFICE OF AERONAUTICS AND SPACE TECHNOLOGY

10UMIS00396

PAGE 51

RUN DATE: 05/12/77

CURRENT FY UNIVERSITY OBLIGATIONS

EXPENDITURES

MARSHALL SPACFLT CTR

AS OF MARCH 31, 1977

RTOP	INSTITUTION	GRANT/CONTRACT	DESCRIPTION	(\$1,000 S)
126-00-00	PENN STATE U-UNIV PK	NAS 8-27334	STRUCTURE OF TURBULENCE IN SEVERE ATMOSPHERIC CONDITIONS	2
502-00-00	UNIV ALA-TUSCALOOSA	NAS 8-25562	THE STUDY OF THE EFFECTS OF ATMOSPHERIC TURBULENCE ON LASER COMMUNICATION SYSTEM	2
505-08-10	PENN STATE U-UNIV PK	NAS 8-32046	DYNAMIC STRUCTURE OF STABLE ATMOSPHERIC BOUNDARY LAYER	9
505-08-10	TEXAS A&M UNIVERSITY	NAS 8-31234	STEADY WIND TURBULENCE ENVIRONMENTS	1
505-08-10	UNIV ALA-HUNTSVILLE	NAS 8-31729	NUMERICAL SIMULATION OF WARM FOGS	7
505-08-10	UNIV ARKANSAS-FAYETV	NAS 8-31550	STATISTICAL ANALYSES OF MULTIVARIATE ATMOSPHERIC VARIABLES	5
505-08-10	UNIV OF DAYTON	NAS 8-31294	EXAMINATION OF REQUIREMENTS AND METHODS FOR REPORTING ATMOSPHERIC INFORMATION	21
505-08-10	UNIV OF DAYTON	NAS 8-32111	TURBULENCE STUDY	22
505-08-10	UNIV TENNESSEE-KNOXV	NAS 8-29584	STUDY OF WIND PROFILES OVER NONUNIFORM SURFACE RELATIVE TO GROUND DESIGN OF AIRCRAFT & SPACE VEHICLES	77
506-00-00	AUBURN UNIV-AUBURN	NAS 8-31572	DESIGN, PROCESSING AND TEST OF LARGE SCALE INTEGRATED CIRCUIT ARRAYS	4
506-00-00	HARVARD UNIVERSITY	NAS 8-31549	DEVELOPMENT OF A MICROCHANNEL PLATE DETECTOR	22
506-18-31	AUBURN UNIV-AUBURN	NAS 8-31572	DESIGN, PROCESSING AND TEST OF LARGE SCALE INTEGRATED CIRCUIT ARRAYS	5
506-18-31	MISSISSIPPI STATE U	NAS 8-26749	A STUDY OF TRENDS AND TECHNIQUES FOR SPACE BASE ELECTRONICS	10
506-18-31	UNIV OF SO FLORIDA	NAS 8-31172	INVESTIGATION OF ELECTRICAL PROPERTIES OF CONDUCTIVE ADHESIVES AND FILM RESISTORS	6
506-18-32	TEXAS A&M UNIVERSITY	NAS 8-26379	DEVELOPMENT OF TECHNIQUES TO CONTROL DISLOCATIONS CREATED DURING THE FABRICATION OF LARGE SCALE INTEGRATED CIRCUIT ALLOYS	11
750-00-00	COLORADO STATE UNIV	NAS 8-31673	ZERO-GRAVITY AEROSOL BEHAVIOR	8

13001

Figure 88.

intended to (1) highlight project renewal performance by individuals and (2) alert individuals to the need for making renewal decisions on specific projects in the near future.

Grants and contracts are arranged by names of individuals -- the responsible technical officers -- within each OSS program division. (Program division names and mail codes are hard coded; hence, reprogramming is necessary each time OSS re-organizes.)

Construction of the report is most easily understood by viewing it as two separate reports, written from two separate data bases, but "interwoven" line-by-line during printing. This is possible as the sorts on "both" reports are the same. The "first" report is similar to the regular DANALYST, i.e., its data sources: the Policy Compliance File and Form 1356 data when the type of action = 3 (Additional Funds and Time). Only projects which the program determines were renewed late are listed on the report. The user can specify a date range on the Report Control form to specify which contracts are listed. Just as with the DANALYST, only records with obligation dates within the selected range

will be printed. (If it is desired to suppress this section of the report, a date range can be entered in which there can be no data.) The second section of the report lists all projects with ending dates falling in a selected range. The data base here is all OSS projects, both past and present. While the data range is intended to be used for ending dates in the future, it will work with any pair of dates. The report may be suppressed by specifying a range into which no data can fall.

2. Preparation of the Request Form

The portion of the Report Control Form to be completed is illustrated below:

**HQ RENEWAL REPORT**

**Renewal Selection (Inclusive)**

1. From Month	<input type="checkbox"/>
2. From Year	<input type="checkbox"/>
3. To Month	<input type="checkbox"/>
4. To Year	<input type="checkbox"/>

**Due Selection (Inclusive)**

1. From Month	<input type="checkbox"/>
2. From Year	<input type="checkbox"/>
3. To Month	<input type="checkbox"/>
4. To Year	<input type="checkbox"/>

The renewal selection is used to specify the date range for projects renewed late. The due selection column allows for entry of the

date range for project end dates.

3. Output Reports Generated

An example of the formatted OSS-DANALYST report is shown as Figure 89.

CSS-DANALYST

OFFICE OF UNIVERSITY AFFAIRS  
UNIVERSITY PERSONNEL MANAGEMENT INFORMATION SYSTEM

RUN DATE: 04/02/76

CSS UNIVERSITY GRANT AND CONTRACT PENAL DATA

10UMIS00395

AS OF DATE: 02/29/76

PANGES: PENAL 01/30-01/31. DUE 01/30-01/30.

UNKNOWN DIVISION

RU278201

TECHNICAL OFFICER	EDUCATIONAL INSTITUTION	PRINCIPAL INVESTIGATOR	GRANT/CONTRACT #	WEEKS REPORTED	START DATE	TERMINATION DATE	WEEKS LATE
WELDON	COLUMBIA UNIVERSITY	NOVICK	NSG 7075		DUE 06-30-76		
WELDON	HARVARD UNIVERSITY	PARKINSON	NSG 7C09		DUE 01-31-75		
WELDON	NEW YORK INST TECH	STROCK	NGP 33-230-002		DUE 06-01-73		
WELDON	SACRAMENTO CITY COL	VORPAHL	NGP 05-084-002		DUE 01-31-75		
WELDON	STANFORD UNIVERSITY	STUBBACH	NGP 05-020-512		DUE 09-30-72		
WELDON	STATE UNY-STONY BROK	STROCK	NSG 7003		DUE 06-30-76		
WELDON	UNIV CALIF-BERKELEY	PHILLIPS	NGP 05-003-499		DUE 05-31-73		
WELDON	UNIV OF CHICAGO	BLAKE	NGP 14-001-164		DUE 12-31-75		
WELDON	UNIV OF MASS-AMHERST	HUERTIN	NGP 22-010-039		DUE 08-31-74		
WELDON	UNIV TEXAS-AUSTIN	LARLEY	NGP 44-012-215		DUE 07-31-73		

NUMBER DUE - 10      NUMBER RENEWED LATE - 0      PERCENT RENEWED LATE - 0.0

AVERAGE WEEKS LATE - 0.0

Figure 89.

## J. Packaging OUA Output Reports

### 1. Concept

User acceptability is of prime importance within the OUA-MIS. Thus output reports follow the long-standing rules and sound practices of good book design. In other words, the computer has not been allowed to interject itself in the physical aspects of the information transfer project.

Therefore, to the extent possible, all reports for distribution are bound on the left edge, placed in attractive covers which fully identify the source of the data, carry meaningful titles and dates, and include such prefatory material as may be required by the casual reader in interpreting or understanding the information. Extraneous pages or pages devoted to material pertinent only to EDP operations are avoided. To a lesser degree similar guidelines apply to system outputs used primarily by OUA personnel for system management and maintenance.

Capabilities for producing reports meeting these criteria are designed into the system, requiring little operation attention. However, the operator must be familiar with the various output packages available in order to most effectively meet the needs of OUA customers.

## 2. Types of Output

All OUA output reports are initially produced on tape; there is no automatic hard copy output. In most instances, however, the Form 35 which requests a run, i.e., creation of an output tape, also specifies production of at least one output report from the newly created tape. Regular system options exist for selecting full-size reports from an off-line impact printer, or reduced reports from a Xerox 1200. The same tape can be used for direct production of microfiche. The later capability has been tested for feasibility on a pilot basis. There is no present need, but inclusion of fiche output as a regular system option can be easily accomplished if a future need develops.

## 3. Ordering Reports

Runs 1-6. The normal output from runs 1-6 is reduced, X 1200 printouts. If full size copy is required, the Form 35 allows for it; in the "output option" section, item a. should be checked (see Figure 90).

Run 7. For production reports, complete packaging instructions must be given when the report is ordered. The white Form 35 (Figure 91) is used to specify printout through either (I.) accessing the system and preparing a X 1200 tape or (II.) running off a report

**EXTERNAL SOURCE DATA INPUT SUBMITTAL**

**SECTION I TO BE COMPLETED BY THE SUBMITTING OFFICE (See instructions on reverse)**

1. SUB-SYSTEM TITLE <b>OFFICE OF UNIVERSITY AFFAIRS MANAGEMENT INFORMATION SYSTEM</b>		2. AS/OF DATE	3. FILE I.D. <b>UZ01</b>	
4. TYPE OF INPUT (Card, tape, form, etc.) <b>Transcripts                      Cards</b>		5. CONCERNING THE DATA NOW BEING SUBMITTED AS INPUT ON THIS FILE I.D. FOR THIS AS/OF DATE: <b>N/A</b>		
		(Check one column on each item)		
6. NO. OF ITEMS OF INPUT		A. WERE PARTIAL SUBMISSIONS MADE PRIOR TO THIS ONE?	YES --	NO --
7. DISPOSITION OF INPUT ITEMS <b>Return to Submitter</b>		B. DOES THIS SUBMISSION COMPLETE THE TOTAL INPUT?		YES --
		TIME	--	DATE --

8. REMARKS

OUA-MIS RUN SELECTION FORM:

Request No.: \_\_\_\_\_ of \_\_\_\_\_

Run-1 General File Update

- a. \_\_\_ Update CSF from FACS
- b. OUA Internal Updates:
  - 1. \_\_\_ CSF-DSF (T. 1, T. 21)
  - 2. \_\_\_ Tables (T. 9-15)
  - 3. \_\_\_ OUA Code Change (T. 16)

Run-3 File Maintenance

- a. \_\_\_ UNICODE UNILIST (T. 3-4)
- b. \_\_\_ Form 1356 Input (T. 2)
- c. \_\_\_ Edit Corrections (T. 5-8)  
(Check Transcripts or Cards Attached)
  - 1. \_\_\_ (T. 8) (BUZ32101) PCF
  - 2. \_\_\_ (T. 7) (BUZ32201) TDF
  - 3. \_\_\_ (T. 6) (BUZ32301) ASF

<u>Output Option</u>	
a. <input checked="" type="checkbox"/> Print Full Size	b. ___ Fiche

Run-6 Annual Start

- a. \_\_\_ Purge PCF as of:

M	M	D	D	Y	Y		

Run-2 Update From FACS

- a. \_\_\_ Monthly Data Selection

Run-5 Monthly End Game

- a. \_\_\_ Create Report Files
- b. \_\_\_ Validate Report Files
- c. \_\_\_ CSF List \*
- d. \_\_\_ ASF List \*
- e. \_\_\_ PCF List \*

Run-4 Negative Adjustment

- a. \_\_\_ Automatic

\* Check Only to Print Reports Independent of Validation. Do Not Check a. or b.

9. SIGNATURE OF SUBMITTING OFFICIAL	10. OFFICE CODE <b>P</b>	11. TIME AND DATE SUBMITTED
-------------------------------------	-----------------------------	-----------------------------

**SECTION II TO BE COMPLETED BY DATA PREPARATION SECTION**

12. ROUTING	13. LINE ITEM COUNT	14. LOG. NO.	15. PRODUCT CODE	16. PRIORITY	17. DUE DATE
18. RECIPIENT	19. ACTUAL COUNT	20. RELEASED TO		21. TIME AND DATE RELEASED	

22. REMARKS

Figure 90.



OUA-MIS X1200 INSTRUCTION SHEET

Part 1. Grouped Reports  
(Check one A-J item and complete both 1 and 2)

- A.  Standard Type 2-11 Greenbook Only
  - B.  Ames Obs. (FY or Cum.)
  - C.  Ames Special (Unbound)
  - D.  CASE (No. 2, Institution/FOS)
  - E.  CASE (No. 3, R&D)
  - F.  CASE (No. 4, NSF)
  - G.  DANALYST (Sample Attached)
  - H.  RTOP Analysis
  - I.  HQ Renewal
  - J.  UNILLIST
1.  Copies
2.  Attached prefatory pages to be included to be included.

Part 2. UNICODE  
(Complete 1-3)

- 1.  Copies
- 2.  Attached prefatory pages to be included
- 3. Use:  Sec. 1A;  Sec. 1C;  
 Sec. 2A;  Sec. 2C;  
 Counter page

Part 4. Greenbook Variations  
(Check either A or B, and complete 1-3)

- A.  Single Report:  
 Non-Standard (not Type 2-11) or  
 one Center/Program Office
  - B.  Multiple Reports:  
 All Centers/Program Offices
1.  Copies
2.  Attached prefatory pages to be included
3. Use:  App. A;  App. B;  App. C;  
 App. E;  Counter

Part 5. Round Ames Special  
(Check either A or B and complete 1-4)

- A.  Use Large Covers (8 1/2" x 11")
  - B.  Use Small Covers (8 1/2" x 5 1/2")
1.  Copies
2.  Remove Error/Program Card Lists
3.  Remove Unnumbered Pages
4.  Contains Multiple D Sections

Figure 92.

fied on the RCF are run from the previously prepared X 1200 tape.

- A hard copy listing is always produced automatically when mailing labels are specified. Hence, an RCF form with Part 1, J, completed must accompany mailing label requests.
- Part 4, B, applies only when an RCF form with Greenbook item 3 or 4 is checked.
- A check in Part 5, B, 4 requires the X 1200 operator to separate out each complete "D Section" in a large Ames special report. Each isolated section is then treated as though it has come off the X 1200 as an independent report.

#### 4. Running changes

It is the responsibility of OUA to modify the X 1200 operators' production and binding instructions as required by changed circumstances or modifications in EDP peripherals.

ARF TABLE REPORT - TAB 01 BUZ10104

U	AI	ACCOUNTING	SORT	PG	UPDATE	A	TB*
AI F	ACRNM	INSTALLATION	KEY	ACRNM*	DATE	C	NO*
23	4	5-9	30-3	34-8	* 72	THRU	80*
		10-29					
03	=	10				*740202	C 01*
04	=	10				*730310	C 01*
10	HO	NASA HEADQUARTERS				*110172	A 01*
11	=	10				*730913	C 01*
14	N	ND	NASA DOWNEY			*110172	A 01*
15	=	21				*730501	C 01*
21	ARC	AMES RESEARCH CENTER	0005	OAST		*741004	C 01*
22	LERC	LEWIS RESEARCH CTR	0040	OAST		*741004	C 01*
23	LARC	LANGLEY RESEARCH CTR	0035	OAST		*741004	C 01*
24	DFRC	DRYDEN FLT RES CTR	0010	OAST		*750122	C 01*
25	N	ERC	ELECTRONICS RES CTR	0007	OAST	*741004	C 01*
42	N	N50-C	SMS OFFICE CLEVELAND	0060	OAST	*741004	C 01*
44	N	N50-N	SMS OFFICE NEVADA	0065	OAST	*741004	C 01*
45	=	10				*730611	C 01*
51	CSFC	GODDARD SPAC FLI CTR	0020	OSS		*741004	C 01*
53	WFC	Wallops Flight Ctr	0070	OSS		*741004	C 01*
55	T	JPL	JET PROPULSION LAB	0025	OSS	*741004	C 01*
56	=	10				*730913	C 01*
57	T	WTR	WESTERN TEST RANGE	0072	OSSF	*741004	C 01*
62	MSFC	MARSHALL SPACEFLIGHT CTR	0060	OSSF		*741004	C 01*
64	NSTL	NATE SPACE REC LABS	0055	OSSF		*750318	A 01*
72	USC	JOHNSON SPACE CTR	0007	OSSI		*741004	C 01*
76	KSC	KENNEDY SPACE CENTER	0050	OSSF		*741004	C 01*
88	T	CSG	GODDARD TEST SMC	501	OSS	*741004	C 01*
99	ORANN	ORANN INSTALLATION	0001	OSS		*741004	C 01*

ARF TABLE REPORT - TAB 02

CO U CO	CASE			* UPDATE A TB*
CD F CD	OBJ AC	CASE MAIN OBJECTIVE OF STUDY TEXT		* DATE C NO*
23 4 56	7-12	13-52		* 72 THRU 80*
02	FELLOW FELLOWSHIPS, TRAINEESHIPS			*110172 A 02*
03	PLANT R & D PLANT AND EQUIPMENT			*110172 A 02*
04	EQUIP FACILITIES AND EQUIPMENT FOR INSTRUCTION			*110172 A 02*
05	GENRL GENERAL SUPPORT OF SCIENCE & ENGINEERING			*110172 A 02*
06	OTHRSC OTHER ACTIVITIES RELATED TO SCI AND ENG			*110172 A 02*
07	OTHER ALL OTHER ACTIVITIES			*110172 A 02*
11 = 01	R&D BASIC RESEARCH			*110172 A 02*
12 = 01	R&D APPLIED RESEARCH			*110172 A 02*
13 = 01	R&D DEVELOPMENT			*110172 A 02*
**	** UNKNWN UNKNOWN CASE MAIN OBJECTIVE OF STUDY			*999999 * 02*

## ARF TABLE REPORT - TAB 03

CF	CASE FIELD OF SCIENCE AND ENGINEERING	UPDATE A TB*
CD	FIELD AND SUBFIELD DESCRIPTIVE TEXT	DATE C NO*
23	4-43	72 THRU 80*
11	PHYSICAL SCIENCE - ASTRONOMY	*730310 C 03*
12	PHYSICAL SCIENCE - CHEMISTRY	*110172 A 03*
13	PHYSICAL SCIENCE - PHYSICS	*110172 A 03*
19	PHYSICAL SCIENCE - NEC	*110172 A 03*
21	MATHEMATICS - ANY DISCIPLINE	*110172 A 03*
31	ENVIRONMENTAL SCIENCES - ATMOSPHERES	*110172 A 03*
32	ENVIRONMENTAL SCIENCES - GEOLOGY	*110172 A 03*
33	ENVIRONMENTAL SCIENCES - OCEANOGRAPHY	*110172 A 03*
39	ENVIRONMENTAL SCIENCES - NEC	*110172 A 03*
41	ENGINEERING - AERONAUTICAL	*110172 A 03*
42	ENGINEERING - ASTRONAUTICAL	*110172 A 03*
43	ENGINEERING - CHEMICAL	*110172 A 03*
44	ENGINEERING - CIVIL	*110172 A 03*
45	ENGINEERING - ELECTRICAL	*110172 A 03*
46	ENGINEERING - MECHANICAL	*110172 A 03*
47	ENGINEERING - METALLURGY AND MATERIALS	*110172 A 03*
49	ENGINEERING - NEC	*110172 A 03*
51	LIFE SCIENCES - BIOLOGY	*110172 A 03*
52	LIFE SCIENCES - CLINICAL MEDICAL	*110172 A 03*
53	LIFE SCIENCES - OTHER MEDICAL	*110172 A 03*
59	LIFE SCIENCES - NEC	*110172 A 03*
61	PSYCHOLOGY - BIOLOGICAL	*110172 A 03*
62	PSYCHOLOGY - SOCIAL	*110172 A 03*
69	PSYCHOLOGY - NEC	*110172 A 03*
71	SOCIAL SCIENCES - ANTHROPOLOGY	*110172 A 03*
72	SOCIAL SCIENCES - ECONOMICS	*110172 A 03*

ARF TABLE REPORT - TAB 04

C	CASE MAJOR GROUP TEXT	CASE MAJOR	*UPDATE A TB*
G	FIELD ABBREV	DATE	C NO*
3	4-26	27-37	* 72 THRU 80*
1	PHYSICAL SCIENCE	PHYS SCI	*110172 A 04*
2	MATHEMATICS	MATH	*110172 A 04*
3	ENVIRONMENTAL SCIENCES	ENVIRON SCI	*110172 A 04*
4	ENGINEERING	ENGRNG	*110172 A 04*
5	LIFE SCIENCES	LIFE SCI	*110172 A 04*
6	PSYCHOLOGY	PSYCH	*110172 A 04*
7	SOCIAL SCIENCES	SOC SCI	*110172 A 04*
9	MULTI/INTERDISCIPLINARY INTER DIS		*110172 A 04*
*	UNKNOWN CASE MAJ.	FIELD UNKNOWN MAJ	*999999 * 04*

## ARF TABLE REPORT - TAB 05

BUZ10104

CF	CASE	UPDATE A TB*
CD	SUBFIELD TITLES	SUBFIELD ABREV * DATE C NO*
23	4-23	24-50 * 72 THRU 80*
11	ASTRONOMY	*110172 A 05*
12	CHEMISTRY	*110172 A 05*
13	PHYSICS	*110172 A 05*
19	PHYSICAL SCI..NEC	*110172 A 05*
21	MATHEMATICS	*110172 A 05*
31	ATMOSPHERIC SCIENCES	*110172 A 05*
32	GEOLOGICAL SCIENCES	*110172 A 05*
33	OCEANOGRAPHY	*110172 A 05*
39	ENVIRON. SCI.. NEC	*730501 C 05*
41	AERONAUTICAL	*110172 A 05*
42	ASTRONAUTICAL	*110172 A 05*
43	CHEMICAL	*110172 A 05*
44	CIVIL	*110172 A 05*
45	ELECTRICAL	*110172 A 05*
46	MECHANICAL	*110172 A 05*
47	METAL & MATERIALS	*110172 A 05*
49	ENGINEERING	*730413 A 05*
51	BIOLOGY	*110172 A 05*
52	CLINICAL MEDICAL	*110172 A 05*
53	OTHER MEDICAL	*110172 A 05*
59	LIFE SCIENCES, NEC	*110172 A 05*
61	BIOLOGICAL	*110172 A 05*
62	SOCIAL ASPECTS	*110172 A 05*
69	PSYCHOLOGICAL, NEC	*110172 A 05*
71	ANTHROPOLOGY	*110172 A 05*
72	ECONOMICS	*110172 A 05*

ARF TABLE REPORT - TAB 06

STA CDE	STATE ABREV	STATE NAME	GR*UPDATE CD* DATE	A TB- C NO*
1-3	4-11	12-31	23- 72	THRU 80*
001	ALA	ALABAMA	06*110172	A 06*
002	ALAS	ALASKA	09*110172	A 06*
004	ARI	ARIZONA	08*110172	A 06*
005	ARK	ARKANSAS	07*110172	A 06*
006	CAL	CALIFORNIA	09*110172	A 06*
008	COL	COLORADO	08*110172	A 06*
009	CONN	CONNECTICUT	01*110172	A 06*
010	DEL	DELAWARE	05*110172	A 06*
011	DC	DISTRICT OF COLUMBIA	05*730912	C 06*
012	FLA	FLORIDA	05*110172	A 06*
013	GA	GEORGIA	05*110172	A 06*
015	HAW	HAWAII	09*110172	A 06*
016	IDA	IDAHO	08*110172	A 06*
017	ILL	ILLINOIS	03*110172	A 06*
018	IND	INDIANA	03*110172	A 06*
019	IOWA	IOWA	04*110172	A 06*
020	KAN	KANSAS	04*750811	C 06*
021	KY	KENTUCKY	06*110172	A 06*
022	LA	LOUISIANA	07*110172	A 06*
023	ME	MAINE	01*110172	A 06*
024	MD	MARYLAND	05*110172	A 06*
025	MASS	MASSACHUSETTS	01*110172	A 06*
026	MICH	MICHIGAN	03*110172	A 06*
027	MINN	MINNESOTA	04*110172	A 06*
028	MISS	MISSISSIPPI	06*110172	A 06*
029	MO	MISSOURI	04*110172	A 06*



04/21/76

QUA MANAGEMENT INFORMATION SYSTEM

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ARF TABLE REPORT - TAB 07

BUZ10104

GR	CD	GEOGRAPHIC REGION	DATE	UPDATE A TB*
23		4-23	* 72 THRU 80*	
01		NEW ENGLAND	*110172 A 07*	
02		MIDDLE ATLANTIC	*110172 A 07*	
03		EAST NORTH CENTRAL	*110172 A 07*	
04		WEST NORTH CENTRAL	*110172 A 07*	
05		SOUTH ATLANTIC	*110172 A 07*	
06		EAST SOUTH CENTRAL	*110172 A 07*	
07		WEST SOUTH CENTRAL	*110172 A 07*	
08		MOUNTAIN	*110172 A 07*	
09		PACIFIC	*110172 A 07*	
10		US OUTLYING AREAS	*110172 A 07*	
11		FOREIGN COUNTRIES	*110172 A 07*	
"		UNK GEOGRAPHIC REGIO	*999999 * 07*	

ARF TABLE REPORT - TAB 08

BUZ10104

COG	PROG	PROGRAM	OFFICE	NAME	MAIL	CODE	DIVISION	NAME	KEY*	UPDATE	TR*
1-3	4-8	9-28	29-33	34-53					54-7*	72	THRU 80*
AAA	MISC	VARIOUS OFFICES	AA	ASSOC ADMINR					9075*	730501	C 08*
AAB	MISC	VARIOUS OFFICES	Q	PERSONNELL PGMS					9297*	760212	C 08*
AAC	OSS	SPACE SCIENCE	SG	PHYSICS & ASTRONOMY					9403*	760421	A 08*
AAG	OA	APPLICATIONS	ED	APPLICATIONS					1132*	730602	C 08*
AAH	MISC	VARIOUS OFFICES	FE	EDUCATL PGM					9143*	730602	C 08*
AAK	MISC	VARIOUS OFFICES	GP	GEN. CNSL. PATENTS					9155*	730501	C 08*
AAL	MISC	VARIOUS OFFICES	I	INTERNATL AFFAIRS					9165*	730501	C 08*
AAM	MISC	VARIOUS OFFICES	QG	OCCUPATL MED					9298*	760209	C 08*
AAO	MISC	VARIOUS OFFICES	HP	PROCUREMENT. POLICY					9162*	740301	A 08*
AAP	MISC	VARIOUS OFFICES	OP	PERSONNEL					9299*	760209	C 08*
AAQ	MISC	VARIOUS OFFICES	AD	DPY ADMINR					9080*	741004	A 08*
AAS	MISC	VARIOUS OFFICES	BX	FACILITIES					9083*	750218	A 08*
AAT	MISC	VARIOUS OFFICES	U	EQUAL OPPORTUNITY					9435*	750624	A 08*
AAU	MISC	VARIOUS OFFICES	EE	DATA MGMT					1133*	751121	A 08*
030	MISC	VARIOUS OFFICES	MISC	VARIOUS OFFICES						*110172	A 08*
110	SVCS	HDQS CONTRACT SVCS		HDQS CONTRACT SVCS						*110172	A 08*
200	IA&TU	INDUSTRY AFFAIRS	K	INDUSTRY AFFAIRS					9230*	730916	A 08*
250	IA&TU	INDUSTRY AFFAIRS	KT	TECHNOLOGY UTILIZATN					9235*	730917	C 08*
270	IA&TU	INDUSTRY AFFAIRS	KC	LOW COST SYSTEMS					9232*	760209	C 08*
300									9240*	760414	A 08*
370	OJA	UNIVERSITY AFFAIRS	P	SUSTAINING UNIV PROG					9245*	750430	C 08*
371	OJA	UNIVERSITY AFFAIRS	P	UNIV RES-APPLICATION					9255*	750430	C 08*
400	OEP	ENERGY PROGRAMS	N	ENERGY					9295*	741210	C 08*
500	OT&DA	TRACKING & DATA ACQ	OT&DA	TRACKING & DATA ACQ						*110172	A 08*
530	OT&DA	TRACKING & DATA ACQ	TR	DOD COORDINATION					8430*	110172	A 08*
540	OT&DA	TRACKING & DATA ACQ	TA	ADVANCED SYSTEMS					8420*	730602	C 08*

BUZ10105

OUA-MIS SORT KEY LIST

SORT NASA INSTALLATION OR ACRO- TB  
KEY HEADQUARTERS OFFICE NYM NO

- 1140 TECH APPLICATIONS ET 08
- 9143 EDUCATL PGM FE 08
- 9155 GEN CNSL. PATENTS GP 08
- 9162 PROCUREMENT. POLICY HP 08
- 9165 INTERNATL AFFAIRS I 08
- 9230 INDUSTRY AFFAIRS K 08
- 9232 LOW COST SYSTEMS KC 08
- 9235 TECHNOLOGY UTILIZATN KT 08
- 9240
- 9245 SUSTAINING UNIV PROG P 08
- 9255 UNIV RES-APPLICATION P 08
- 5258 DATA SYST & FLT OPNS 08
- 5259 OTHER FLIGHT 08
- 5260 APOLLO MA 08
- 5263 APOLLO/SOYUZ PROJ MA 08
- 5265 SORTIE LAB MF 08
- 5267 SPACE SHUTTLE MH 08
- 5270 SKYLAB ML 08
- 5275 SPACE LIFE SCIENCES MM 08
- 5285 DEV-TEST-OPERATIONS MR 08
- 5290 ADVANCED PROGRAMS MT 08
- 5292 EXPENDABLE VEHICLES MV 08
- 9295 ENERGY N 08
- 9297 PERSONNEL PGMS Q 08
- 9298 OCCUPATL MED QG 08
- 9299 PERSONNEL QP 08

APPENDIX B

Record Contents of the Data Files

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION RECORD CONTENT					PAGE <u>1</u> OF <u>1</u>	
1. TITLE OUA-MIS CONTRACT SELECT FILE			2. DATE PREPARED		3. FILE I.D. BUZ10201	
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> J. LIST <input type="checkbox"/> e.			5. RCD. LENGTH (Incl. 1) 80		6. BLOCKING FACTOR 162	
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN		8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE		9. SEQUENCE (Major-minor; use item numbers)		
10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1	GCNUM	1	11	CONTRACT NUMBER	X	11
2	OUA-CODES	12	19	OUA-CODES	X	8
3	CIC-CODES	20	26	CONTRACTOR IDENTIFICATION CODE	X	7
4	ALPHA-CODES	27	33	ALPHA-CODES	X	7
5	PPC-CODES	34	35	PROCUREMENT PLACEMENT CODE	X	2
6	DIV-ENGLS	36	55	DIVISION ENGLISH	X	20
7	CON-DISTS	56	57	CONGRESSIONAL DISTRICT	X	2
8	BUS-TYPES		58	TYPE OF BUSINESS	X	1
		59	71	FILLER-FUTURE USAGE	X	13
9	ENTRY DATE	72	77	ENTRY DATE YYYYMMDD	X	6
10	NEW-CONT		78	ACTION CODE	X	1
11	SOURCE-CODE	79	80	SOURCE-CODE	X	2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 1 OF 5

1. TITLE <b>OUA-MIS CONTRACT DATA FILE</b>		2. DATE PREPARED	3. FILE I. D. <b>BUZ32001</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. t) <b>650</b>	6. BLOCKING FACTOR <b>19</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1.	SEG-BASECON	1	161	SEGMENT 1 - BASIC CONTRACT INFORMATION - CONSTANTS		161
A	DELETE-BYTE	1	1	DELETE CHARACTER (ISAM)	X	1
B	GCNUM	2	12	GRANT/CONTRACT NUMBER	X	11
C	OUA-CODES	13	20	OUA CODE	X	8
D	CASE-OBJ	21	22	C.A.S.E. OBJECTIVE OF STUDY CODE	X	2
E	CASE-FIELD	23	24	C.A.S.E. FIELD OF SCIENCE CODE	X	2
F	MED-FLAG		25	MEDICAL SCHOOL FLAG	X	1
G	CIC-CODE	26	32	CONTRACTOR IDENTIFICATION CODE	X	7
H	PPC-CODE	33	34	PROCUREMENT PLACEMENT CODE	X	2
I	DIV-ENGL	35	54	DIVISION ENGLISH	X	20
J	CSTAT-FACS		55	CONTRACT STATUS - FACS	X	1
K	CSTAT-OUA		56	CONTRACT STATUS - OUA	X	1
L	MOA-FLAG		57	METHOD OF AUTHORIZATION	X	1
M	EXT-COMP		58	EXTENT OF COMPETITION	X	1
N	SEC-CLASS		59	SECURITY CLASSIFICATION	X	1
O	TRAINING-FLAG		60	OBJECT CLASS FLAG-TRAINING SWITCH	X	1
P	FFRDC-FLAG		61	FFRDC-FLAG	X	1
Q	CON-DISTC	62	63	CONGRESSIONAL DISTRICT-CONTRACT	X	2
			B-2		X	7

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 2 OF 5

1. TITLE OUA-MIS CONTRACT DATA FILE		2. DATE PREPARED	3. FILE I. D. BUZ32001
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. ?) 650	6. BLOCKING FACTOR 19
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN		8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
R	START DATE	64	70	CONTRACT START DATE	X	7
S	END-DATE	71	77	CURRENT CONTRACT ENDING DATE	X	7
T	ACTG-INST	78	79	ACCOUNTING INSTALLATION	X	2
U	PROC-INST	80	81	PROCURING INSTALLATION	X	2
V	KIND-ACT	82	83	KIND OF ACTION CODE	X	2
W	EST-COST	84	91	ESTIMATED COST OR PRICE	X	8
X	STEP-CODE		92	STEP FUNDING CODE	X	1
Y	FUTFUN-CODE	93	94	FUTURE FUNDING CODE	X	2
Z	FUTFUN-DATE	95	98	FUTURE FUNDING ENTRY DATE - MMY	X	4
AA	PASS-THRU	99	104	PASS THRU DATE - MMDDYY	X	6
BB	ALPHA-CODE	105	111	ALPHA CODE	X	7
CC	REL-CODE	112	113	RELEVANCE CODE	X	2
DD	CY-RTOP	114	124	CURRENT YEAR - RTOP	X	11
EE	PURORD-FLAG		125	PURCHASE ORDER FLAG	X	1
FF	GCNUM-14	126	139	CONTRACT NUMBER CODE	X	14
		140	161	FILLER-FUTURE USAGE	X	22
2.	SEG-TECHOFF	162	251	SEGMENT 2 - NASA TECHNICAL OFFICER DATA		90
A	PRIME-TO	162	191	PRIMARY TECHNICAL OFFICER	X	30
1	TOL-NAME	162	191	PTO-NAME	X	17
a	TOL-INIT1		162	-1st INITIAL	X	1

B-3

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 3 OF 5

1. TITLE <b>OUA-MIS CONTRACT DATA FILE</b>		2. DATE PREPARED	3. FILE I.D. <b>BUZ32001</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e.		5. RCD. LENGTH (Incl. *) <b>650</b>	6. BLOCKING FACTOR <b>19</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION							
ITEM NO. g.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.	
		BEGIN c.	END d.				
b	TO1-INIT2		163	- MIDDLE INITIAL	X	1	
c	TO1-SURNAME	164	178	- SURNAME	X	15	
2.	TO1-INST	179	180	PTO- INSTALLATION	X	2	
3.	TO1-MAIL	181	191	PTO- MAIL CODE	X	11	
B	ALTER-TO	192	221	ALTERNATE TECHNICAL OFFICER	X	30	
1.	TO2-NAME	192	208	ATO- NAME	X	17	
a	TO2-INIT1		192	- 1st INITIAL	X	1	
b	TO2-INIT2		193	- MIDDLE INITIAL	X	1	
c	TO2-SURNAME	194	208	- SURNAME	X	15	
2.	TO2-INST	209	210	ATO- INSTALLATION	X	2	
3.	TO2-MAIL	211	221	ATO- MAIL CODE	X	11	
			222	251	FILLER-FUTURE USAGE	X	30
3	SEG-PRININ	252	321	SEGMENT 3 - PRINCIPAL INVESTIGATOR DATE		70	
A	PI1-NAME	252	268	1st PRINCIPAL INVESTIGATOR NAME	X	17	
1.	PI1-INIT1		252	1st PI-1st INITIAL	X	1	
2.	PI1-INIT2		253	1st PI-MIDDLE INITIAL	X	1	
3.	PI1-SURNAME	254	268	1st PI-SURNAME	X	15	
B	PI2-NAME	269	285	2nd PRINCIPAL INVESTIGATOR NAME	X	17	
1.	PI2-INIT1		269	2nd PI-1st INITIAL	X	1	
2.	PI2-INIT2		270	2nd PI-MIDDLE INITIAL	X	1	

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 4 OF 5

1. TITLE <b>OUA-MIS CONTRACT DATA FILE</b>		2. DATE PREPARED	3. FILE I. D. <b>BUZ32001</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. 1) <b>650</b>	6. BLOCKING FACTOR <b>19</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
3.	PI2-SURNAME	271	285	2nd PI-SURNAME	X	15
C	PI3-NAME	286	302	3rd PRINCIPAL INVESTIGATOR NAME		17
1.	PI2-INIT1		269	2nd PI-1st INITIAL	X	1
2.	PI2-INIT2		270	2nd PI-MIDDLE INITIAL	X	1
3.	PI2-SURNAME	271	285	2nd PI-SURNAME	X	15
C	PI3-NAME	286	302	3rd PRINCIPAL INVESTIGATOR NAME		17
1.	PI3-INIT1		286	3rd PI-1st INITIAL	X	1
2.	PI3-INIT2		287	3rd PI-MIDDLE INITIAL	X	1
3.	PI3-SURNAME	288	302	3rd PI-SURNAME	X	15
		303	321	FILLER-FUTURE USAGE	X	19
4	SEG-FUTURE	322	401	SEGMENT 4-FUTURE EXPANSION		80
A	UPN	322	325	UPN-COUNTER	COMP3	4
B	AWCS	326	329	AWCS-COUNTER	COMP3	4
C	AMES	330	333	AMES-COUNTER	COMP3	4
D	POLICOMP	334	337	POLICY COMPLIANCE COUNTER	COMP3	4
E	TDF-NO	338	339	TECHNICAL DESCRIPTION FILE NUMBER	X	2
F	MOD-NO	340	342	MODIFICATION NUMBER	X	3
		342	401	FILLER-FUTURE USAGE	X	59
5.	SEG-MONIES	402	641	SEGMENT 5-FINANCIAL STATISTICS DATA		240
A		402	441	CURRENT FISCAL YEAR FINANCIAL DATA	COMP3	40
			B-5			



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
RECORD CONTENT

PAGE 5 OF 5

1. TITLE OUA-MIS CONTRACT DATA FILE		2. DATE PREPARED	3. FILE I. D. BUZ32001
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e.		8. RCD. LENGTH (Incl. 1) 650	6. BLOCKING FACTOR 19
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN		8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME c.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1.	CFY-OBS	402	409	CFY-OBLIGATIONS	COMP3	8
2.	OUA-OBS	410	417	OUA-OBLIGATIONS	COMP3	8
3.	CUM-OBS	418	425	CUMULATIVE OBLIGATIONS	COMP3	8
4.	CFY-DIS	426	433	CFY-DISBURSEMENTS	COMP3	8
5.	CUM-DIS	434	441	CUMULATIVE-DISBURSEMENTS	COMP3	8
B		442	481	CFY-1 FINANCIAL DATA	COMP3	40
C		482	521	CFY-2 FINANCIAL DATA	COMP3	40
D		522	561	CFY-3 FINANCIAL DATA	COMP3	40
E		562	601	CFY-4 FINANCIAL DATA	COMP3	40
F		602	641	CFY-5 FINANCIAL DATA	COMP3	40
FIELDS B-F HAVE THE SAME STRUCTURE AS A.						
6	SEG-DATAMGT	642	650	SEGMENT 6-DATA MANAGEMENT SECTION		9
A	UPDT-DATE	642	649	DATE OF LAST UPDATE	X	8
			650	FILLER-FUTURE USAGE	X	1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 1 OF 4

1. TITLE <b>OUA-MIS ANCILLARY REFERENCE FILE</b>		2. DATE PREPARED	3. FILE I.D. <b>BUZ10101</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e.		5. RCD. LENGTH (Incl. 1) <b>80</b>	6. BLOCKING FACTOR <b>162</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1		1	80	GENERAL FORMAT		80
A	TAB-KEY	1	3	SPECIFIC TABLE SORT KEY	X	3
B	TAB-DATA	4	71	DATA ENTRIES	X	68
C	TAB-UPDT	72	77	UPDATE DATE FOR ENTRY	X	6
D	TAB-AC		78	ENTRY ACTION CODE	X	1
E	TAB-ID	79	80	TABLE IDENTIFICATION NUMBER	X	2
TABLE 01 - ACCOUNTING, PROCURING AND TECH OFFICER INSTALLATION						
			1	BLANK	X	1
A	TAB01-INST-CODE	2	3	INSTALLATION CODE	X	2
B	TAB01-USE-FLAG		4	USAGE FLAG	X	1
C	TAB01-ACRONYM	5	9	INSTALLATION ACRONYM	X	5
D	TAB01-INST-NAME	10	29	INSTALLATION NAME	X	20
E	TAB01-SORT-KEY	30	33	INSTALLATION SORT KEY	X	4
F	TAB01-PROG ACRONYM	34	38	PROGRAM OFFICE ACRONYM	X	5
		39	71	FILLER-NOT UTILIZED	X	33
TABLE 02 - C.A.S.E. MAIN OBJECTIVE OF STUDY						
			1	BLANK	X	1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 2 OF 4

1. TITLE OUA-MIS ANCILLARY REFERENCE FILE		2. DATE PREPARED	3. FILE I.D. BUZ10101
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input checked="" type="checkbox"/> c. DISK <input type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. t) 80	6. BLOCKING FACTOR 162
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN		8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
A	TAB02-CASE- OBJCODE	2	3	C.A.S.E. OBJECTIVE OF STUDY GUIDE	X	2
B	TAB02-USE- FLAG		4	USE OF CODE FLAG	X	1
C	TAB02-GROUP	5	6	MAIN OBJECTIVE GROUP NUMBER	X	2
D	TAB02-OBJ- ACRONYM	7	12	C.A.S.E. OBJECTIVE OF STUDY ACRONYM	X	6
E	TAB02-OBJ- TITLE	13	52	OBJECTIVE OF STUDY TITLE	X	40
		53	71	FILLER-NOT UTILIZED	X	19
	TABLE 03 - C.A.S.E. FIELD			OF SCIENCE AND ENGINEERING		
			1	BLANK		
A	TAB03-CASE FLDCODE	2	3	C.A.S.E. FIELD OF SCIENCE CODE	X	2
B	TAB03-CASE- FLD-AND-SUB	4	43	FIELD OF SCIENCE TITLE	X	40
		44	71	FILLER-NOT UTILIZED	X	28
	TABLE 04 - C.A.S.E. FIELD			OF SCIENCE AND ENGINEERING MAJOR		
				GROUPING		
		1	2	BLANK	X	2
A	TAB04-CASE GROUP		3	C.A.S.E. FIELD GROUP CODE	X	1
B	TAB04-CASE- MAJOR-FIELD	4	26	MAJOR C.A.S.E. FIELD FULL NAME	X	23
			B-8			

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

PAGE 3 OF 4

1. TITLE  
 OUA-MIS ANCILLARY REFERENCE FILE

2. DATE PREPARED

3. FILE I. D.  
 BUZ10101

4. TYPE  
 a. CARD  b. TAPE  c. DISK  d. LIST  e. \_\_\_\_\_

5. RCD. LENGTH (Incl. 3)  
 80

6. BLOCKING FACTOR  
 162

7. PARITY  
 a. ODD  b. EVEN

8. MODE  
 a. LOAD  b. MOVE

9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. g.	STANDARD LABEL b.	LOCATION		ITEM NAME	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
C	TAB04-CASE-MAJFLD-ABRV	27	37	MAJOR C.A.S.E. FIELD ABBREVIATION	X	11
		38	71	FILLER-FUTURE USAGE	X	34
TABLE 05 - C.A.S.E. UTILITY ENGLISH						
			1	BLANK	X	1
A	TAB05-CASE-FLDCODE	2	3	C.A.S.E. FIELD OF SCIENCE CODE	X	2
B	TAB05-CASE-SUBFIELD	4	23	C.A.S.E. SUBFIELD TITLE	X	20
C	TAB05-CASE-SUBABREV	24	39	C.A.S.E. SUBFIELD TITLE ABBREVIATION	X	16
		40	71	FILLER-NOT UTILIZED	X	32
TABLE 06 - STATE CODE, ACRONYM, NAME AND REGION CODE						
A	TAB06-STATE CODE	1	3	STATE/COUNTRY CODE	X	3
B	TAB06-STATE ABREV	4	11	STATE NAME ABBREVIATION	X	8
C	TAB06-STATE NAME	12	31	STATE NAME	X	20
D	TAB06-REGION CODE	32	33	GEOGRAPHIC REGION CODE	X	2
		34	71	FILLER-NOT UTILIZED	X	38
TABLE 07 - STANDARD GEOGRAPHIC REGION CODES AND NAMES						
			1	BLANK	X	1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**RECORD CONTENT**

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1. TITLE <b>OUA-MIS ANCILLARY REFERENCE FILE</b>		2. DATE PREPARED	3. FILE I.D. <b>BUZ10101</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e.		5. RCD. LENGTH (Incl. #) <b>80</b>	6. BLOCKING FACTOR <b>162</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
A	TAB07-REGION CODE	2	3	GEOGRAPHIC REGION CODE	X	2
B	TAB07-REGION-NAME	4	23	GEOGRAPHIC REGION NAME	X	20
		24	71	FILLER-NOT UTILIZED	X	48
	TABLE 08 - COG/PROGRAM OFFICE, MAIL CODE AND SORT KEY					
A	TAB08-COG	1	3	COGNIZANT OFFICE CODE	X	3
B	TAB08-PROG-ABREV	4	8	PROGRAM OFFICE ABBREVIATION	X	5
C	TAB08-PROG-NAME	9	28	PROGRAM OFFICE NAME	X	20
D	TAB08-MAIL-CODE	29	33	HEADQUARTERS MAIL CODE	X	5
E	TAB08-DIV-NAME	34	53	DIVISION NAME	X	20
F	TAB08-SORT-KEY	54	57	HEADQUARTERS SORT KEY	X	4
		58	71	FILLER-NOT UTILIZED	X	14

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RECORD CONTENT

PAGE 1 OF 4

1. TITLE: OUA-MIS UNIVERSITY REFERENCE FILE  
2. DATE PREPARED:  
3. FILE I.D.: BUZ31101

4. TYPE:  a. CARD  b. TAPE  c. DISK  d. LIST  e.  
5. RCD. LENGTH (Incl. t): 950  
6. BLOCKING FACTOR: 13

7. PARITY:  a. ODD  b. EVEN  
8. MODE:  a. LOAD  b. MOVE  
9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1	SEG-BASEUNI	1	101	SEGMENT1 - BASIC UNIVERSITY DATA		101
A	DELETE-BYTE		1	URF ISAM DELETE CHARACTER	X	1
B	OUA-CODE	2	9	OUA CODE	X	8
C	SUN-20	10	29	UNIVERSITY NAME	X	20
D	ALPHA-CODE	30	36	ALPHA CODE	X	7
E	PROP-CODE	37	42	PROPOSAL CODE	X	6
F	STATUS-CODES	43	56	UNIVERSITY STATUS CODING DATA	X	14
1.	TYPE-INST	43	44	TYPE OF INSTITUTION	X	2
2.	ACTIVE-GC	45	47	ACTIVE GRANT/CONTRACT FLAG	X	3
3.	OBL-MONEY	48	50	MONIES OBLIGATED FLAG AND YEAR	X	3
4.	MINORITY		51	MINORITY SCHOOL FLAG	X	1
5.	PRES-STAT		52	STATUS OF UNIVERSITY PRESIDENT	X	1
6.	MAIL-LIST		53	MAILING LIST SUBSCRIBER	X	1
7.	MONEY-REC		54	MONIES RECEIVED FLAG	X	1
		55	56	FILLER-FUTURE USAGE	X	2
G	STUD-POP	57	62	STUDENT POPULATION	X	6
H	FICE-NSF	63	69	F.I.C.E. CODE NSF VERSION	X	7
I	FICE-OE	70	76	F.I.C.E. - OE VERSION	X	7

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**RECORD CONTENT**

PAGE 2 OF 4

1. TITLE: OUA-MIS UNIVERSITY REFERENCE FILE  
 2. DATE PREPARED:  
 3. FILE I.O.: BUZ31101

4. TYPE:  a. CARD  b. TAPE  c. DISK  d. LIST  e. \_\_\_\_\_  
 5. RCD. LENGTH (Incl. 1): 950  
 6. BLOCKING FACTOR: 13

7. PARITY:  a. ODD  b. EVEN  
 8. MODE:  a. LOAD  b. MOVE  
 9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
J	CON-DISTU	77	78	CONGRESSIONAL DISTRICT INSTITUTION	X	2
		79	101	FILLER-FUTURE USAGE	X	23
2	SEG-PRES	102	201	SEGMENT 2 - INSTITUTION'S PRESIDENT DATE		100
A	PRES-NAME	102	144	PRESIDENT'S NAME	X	43
B	PRES-TITLE	145	187	PRESIDENT'S TITLE	X	43
		188	201	FILLER-FUTURE USAGE	X	14
3	SEG-BUSMGR	202	301	SEGMENT 3 - BUSINESS MANAGER'S DATA		100
A	BM-NAME	202	244	BUSINESS MANAGER'S NAME	X	43
B	BM-TITLE	245	287	BUSINESS MANAGER'S TITLE	X	43
		288	301	FILLER-FUTURE USAGE	X	14
4	SEG-RESCON	302	401	SEGMENT 4 - INSTITUTION RESEARCH CONTACT DATA		100
A	RC-NAME	302	344	RESEARCH CONTACT'S NAME	X	43
B	RC-TITLE	345	387	RESEARCH CONTACT'S TITLE	X	43
		388	401	FILLER-FUTURE USAGE	X	14
5	SEG-TELE	402	446	SEGMENT 5 - KEY PERSONNEL TELEPHONE NUMBERS		45
A	BM-TELE	402	417	BUSINESS MANAGER'S TELEPHONE NUMBER (AREA CODE/NUMBER/EXT)	X	16

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1. TITLE <b>OUA-MIS UNIVERSITY REFERENCE FILE</b>		2. DATE PREPARED	3. FILE I. O. <b>BUZ31101</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. 3) <b>950</b>	6. BLOCKING FACTOR <b>13</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
B	RC-TELE	418	433	RESEARCH CONTACT'S TELEPHONE NUMBER (AREA CODE/NUMBER/EXT)	X	16
		434	446	FILLER-FUTURE USAGE		
6	SEG-FUTURE	447	486	SEGMENT6 - RESERVED FOR FUTURE EXPANSION		40
A	CONTRACTS	447	450	CONTRACTS COUNTER	COMP3	4
B	GRANTS	451	454	GRANTS COUNTER	COMP3	4
C	CASE 11	455	458	C.A.S.E. 11 COUNTER	COMP3	4
D	CASE 12	459	462	C.A.S.E. 12 COUNTER	COMP3	4
E	CASE 13	463	466	C.A.S.E. 13 COUNTER	COMP3	4
		467	486	FILLER-FUTURE USAGE	X	20
7	SEG-UNIDAT	487	740	SEGMENT 7 - UNIVERSITY NAME AND LOCATION DATA		254
A	UNI-NAME	487	529	FULL UNIVERSITY NAME	X	43
B	UNI-LOC1	530	572	UNIVERSITY MAILING ADDRESS	X	43
C	UNI-LOC2	573	615	UNIVERSITY MAILING ADDRESS CONTINUED	X	43
D	UNI-LOC3	616	658	UNIVERSITY MAILING ADDRESS CONTINUED	X	43
		659	697	FILLER-FUTURE USAGE	X	39
8	SEG-STATS	698	937	SEGMENT 8 - UNIVERSITY FINANCIAL STATISTICS		240
A		698	737	CURRENT FISCAL YEAR FINANCIAL DATA	COMP3	40

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1. TITLE <b>OUA-MIS TECHNICAL DESCRIPTION FILE</b>		2. DATE PREPARED <b>4/14/76</b>	3. FILE I. D. <b>OUA.BUZ32200</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e.		5. RCD. LENGTH (Incl. ?) <b>80</b>	6. BLOCKING FACTOR <b>162</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN		8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)

10. DESCRIPTION

ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME c.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1	GCNUM	1	11	CONTRACT NUMBER	X	11
2	SEQ-NUM	12	13	DESCRIPTION SEQUENCE CODE	X	2
3	TEXT-DATA	14	63	TECHNICAL DESCRIPTION	X	50
		64	72	FILLER-FUTURE USAGE	X	9
4	UPDATE-DATE	73	80	DATE OF LAST UPDATE	X	8

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PAGE 1 OF 2

1. TITLE <b>OUA-MIS AWCS STATISTICS FILE</b>		2. DATE PREPARED	3. FILE I.D. <b>OUA.BUZ32300</b>
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input type="checkbox"/> c. DISK <input checked="" type="checkbox"/> d. LIST <input type="checkbox"/> e. _____		5. RCD. LENGTH (Incl. 1) <b>120</b>	6. BLOCKING FACTOR <b>108</b>
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
1	AWCS-SEQUENCE	1	24	AWCS SEQUENCING CONTROL FIELDS		24
A	GCNUM	1	11	CONTRACT NUMBER	X	11
B	ACT-INST	12	13	ACCOUNTING	X	2
C	COG-CODE	14	16	COGNIZANT OFFICE CODE	X	3
D	UPN-FPN	17	24	UNIQUE PROJECT NUMBER/ FACILITY PROJECT NUMBER	X	8
1.	UPN-STRUCTURE	17	24	( <del>U</del> /UPN/SRT/SUB1)	X	8
2.	FPN-STRUCTURE	17	24	(FPN/ <del>U</del> / <del>U</del> / <del>U</del> )	X	8
E	UPN-LOOKUP	17	24	UNIQUE PROJECT NUMBER SEARCH ARGUMENT	X	8
1.	UPN-LOOK	17	20	UPN-KEY	X	4
2	UPN-FPN-SWT		25	UPN-FPN-SWITCH	X	1
3	OBS-CFY	26	33	CFY-OBLIGATIONS	COMP3	8
4	OBS-CUM	34	41	CUMULATIVE OBLIGATIONS	COMP3	8
5	CFYOBS-REP	42	49	CFY-OBS-REPORT VALUE	COMP3	8
6	CUMOBS-REP	50	57	CUM-OBS-REPORT VALUE	COMP3	8
7	DIS-CFY	58	65	CFY-DISBURSEMENTS	COMP3	8
8	DIS-CUM	66	73	CUMULATIVE DISBURSEMENTS	COMP3	8
9	GBL-FLAG		74	GREENBOOK USAGE FLAG	X	1
10	TEXT-UPN	75	110	UPN-FPN DESCRIPTIVE TEXT	X	36

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**RECORD CONTENT**

PAGE 2 OF 2

1. TITLE  OUA-MIS AWCS STATISTICS FILE		2. DATE PREPARED	3. FILE I.D.  OUA.BUZ32300
4. TYPE <input type="checkbox"/> a. CARD <input type="checkbox"/> b. TAPE <input checked="" type="checkbox"/> c. DISK <input type="checkbox"/> d. LIST <input type="checkbox"/> e.		5. RCD. LENGTH (Incl. s) 120	6. BLOCKING FACTOR 108
7. PARITY <input type="checkbox"/> a. ODD <input type="checkbox"/> b. EVEN	8. MODE <input type="checkbox"/> a. LOAD <input type="checkbox"/> b. MOVE	9. SEQUENCE (Major-minor; use item numbers)	

10. DESCRIPTION						
ITEM NO. a.	STANDARD LABEL b.	LOCATION		ITEM NAME e.	DATA TYPE	SIZE f.
		BEGIN c.	END d.			
11	UPDATE-DATE		111	FILLER-FUTURE USAGE	X	4
		115	120	DATE OF LAST UPDATE MMDDYY	X	6

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