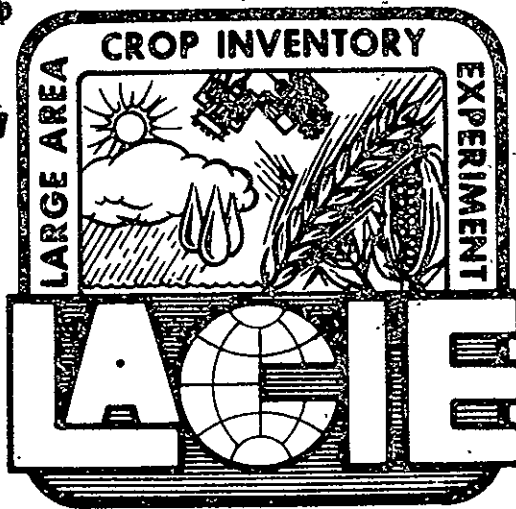


{E79-10054} LARGE AREA CROP INVENTORY N79-13461
EXPERIMENT (LACIE). LEVEL 3 BASELINE; LACIE
PROJECT DOCUMENTATION PLAN (NASA) 59 p HC
A04/MF A01 CSCL 02C Unclas
G3/43 00054

0603
51

LARGE AREA CROP INVENTORY EXPERIMENT (LACIE)

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."



7.9-10.0.5.4
TM-799.21



NASA NOAA USDA

Level III Baseline

LACIE PROJECT
DOCUMENTATION PLAN



National Aeronautics and Space Administration
LYNDON B. JOHNSON SPACE CENTER

Houston, Texas

August 1975

REVISIONS

REV LTR	CHANGE NO.	DESCRIPTION	DATE
		Baseline Issue (Reference CCBD #5M0026 dated 8-11-75)	8-11-75

List of Effective Pages

The current status of all pages in this document is as shown below:

<u>Page No.</u>	<u>LACIE Change Date</u>	<u>Authorizing CCBD</u>
<u>11</u> through <u>viii</u>	7-22-76	6M0032
<u>1</u> through <u>10</u>	Baseline 8-11-75	5M0026
<u>11</u> and <u>12</u>	7-22-76	6M0032
<u>13</u> through <u>A-6</u>	Baseline 8-11-75	5M0026
<u>B-1</u> and <u>B-2</u>	7-22-76 2-03-76	6M0032 5M0062
<u>C-1</u> through <u>E-8</u>	Baseline 8-11-75	5M0026

FOREWORD

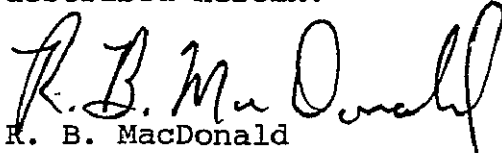
The Large Area Crop Inventory Experiment (LACIE) is an interagency program in which the U.S. Department of Agriculture (USDA), the National Oceanic and Atmospheric Administration (NOAA), and the National Aeronautics and Space Administration (NASA) participate. The objective is to demonstrate the application of Earth resources data acquired by satellite, together with climatological, meteorological, and conventional data sources, to estimate the production of an important world crop.

To implement and operate the LACIE project and to provide management guidance and control for this interagency effort, three management levels have been planned with NASA, USDA, and NOAA participation at each level. (Reference: Interagency Memorandum of Understanding dated October 10, 1974.)

Detailed management and technical responsibilities for the various program elements are defined in the LACIE *Project Plan*. The LACIE requirements to be controlled by the Executive Steering Group (Level 1) have been identified and documented in a summary project plan and management guidelines. Project requirements directives and procedures controlled by the agency project managers (Level 2), primarily project objectives, systems performance, resources, configuration control, and major scheduled milestones are defined in the

Project Plan. Requirements to be controlled by the LACIE manager (Level 3) are identified, documented, and controlled at the project level by LACIE Level 3 documentation. This documentation reflects project implementation, integration, planning, budgeting, scheduling and reporting procedures, functions, and responsibilities.

This plan defines the policies, guidelines, and procedures for the efficient and effective management and control of all LACIE Level 3 generated documents and provides procedures for entering and tracking LACIE-related documents placed in the LACIE project documentation system. All organizations and activities that come under the purview and responsibilities of the LACIE manager will adhere to the provisions of this plan and comply with the procedures described herein.


R. B. MacDonald
LACIE Manager

CONTENTS

Section		Page
1.0	<u>PURPOSE OF THE LACIE PROJECT DOCUMENTATION PLAN</u>	1
2.0	<u>SCOPE</u>	2
3.0	<u>POLICY</u>	4
4.0	<u>LACIE DOCUMENTATION</u>	8
	4.1 DOCUMENTATION LEVELS.	8
	4.2 DOCUMENTATION CLASSES	9
	4.3 DOCUMENTATION TREE/MATRIX	10
	4.3.1 Documentation Tree	10
	4.3.2 Documentation Matrix	10
5.0	<u>DOCUMENTATION CLASSIFICATION</u>	11
6.0	<u>DOCUMENTATION REVIEWS</u>	13
7.0	<u>DOCUMENTATION DISTRIBUTION AND RELEASE</u>	14
	7.1 DISTRIBUTION OF CONTROLLED DOCUMENTS	14
	7.2 DISTRIBUTION OF NONCONTROLLED DOCUMENTS	14
	7.3 RELEASE OF DOCUMENTS.	14
8.0	<u>DOCUMENTS STATUS AND TRACKING SYSTEM</u>	18
9.0	<u>FORMATTING</u>	20
10.0	<u>NUMBERING</u>	21
11.0	<u>REFERENCES</u>	23

Section		Page
Appendix		
A	LACIE LEVEL 3 DOCUMENTATION SYSTEM PROCÉDURES.	A-1
B	LACIE LEVEL 3 DOCUMENTATION NUMBER.	B-1
C	LACIE LEVEL 3 DOCUMENTATION REPORT.	C-1
D	LACIE LEVEL 3 DOCUMENT STATUS AND TRACKING SYSTEM	D-1
E	LACIE ACRONYMS.	E-1

TABLES

Table		Page
C-I	LACIE LEVEL 3 DOCUMENTATION REPORT	C-2
D-I	IDENTIFICATION OF LACIE DOCUMENTS.	D-4

FIGURES

Figure		Page
1	Current LACIE documentation tree	5
2	LACIE documentation matrix -- state/function/ agency	6
3	Evolution of a document.	7
A-1	The LACIE Level 3 documentation system . . .	A-6
D-1	Documentation status and tracking flow chart.	D-5

1.0 PURPOSE OF THE LACIE PROJECT DOCUMENTATION PLAN

The purpose of the *LACIE Project Documentation Plan* is to define and establish the responsibilities, policies, guidelines, and procedures for the generation, approval, classification, formatting, numbering, control, and distribution of LACIE documents initiated internally by all LACIE Level 3 project elements. This plan also establishes procedures for entering into the LACIE project documentation system those LACIE-related documents originated by organizations and activities external to the purview of the LACIE manager. Additionally, it identifies documentation interfaces with the LACIE configuration management system.

2.0 SCOPE

The procedures and provisions defined in this plan apply to all organizations, functional elements, and personnel involved in the LACIE project. These include LACIE support activities at the Goddard Space Flight Center (GSFC), the Data Systems Analysis Directorate (DSAD), the USDA and NOAA interagency supporting staff, support service contractor personnel, universities, special contractors, and consultants. Provisions of this plan, including subsequent changes and revisions, will apply throughout all phases of the LACIE project, unless otherwise rescinded.

Documentation products within the scope of this plan include all LACIE-generated and/or LACIE-related information products of the following categories:

Requirements

Plans

Task descriptions

Procedures

Instructions

Reports

This plan outlines the procedures for the approval, classification, formatting, and numbering of LACIE Level 3 documentation and the provisions and guidelines for the control and release of sensitive LACIE information. In

addition, provisions are included for entering and tracking LACIE-related documentation generated by personnel representing organizations and activities not under the jurisdiction of the LACIE manager in the LACIE Level 3 documentation system.

3.0 POLICY

This plan establishes the procedures for the management and control of LACIE-generated documentation within the LACIE project documentation system. These procedures are promulgated in accordance with the provisions of the *Interagency Memorandum of Understanding*, the *LACIE Management Guidelines*, the *LACIE Project Plan (Preliminary)*, the *LACIE Level 3 Change Control Procedures Manual*, *Identification of JSC-Prepared and -Approved Scientific and Technical Documents (JSCI 2314.2A)*, and *Freedom of Information Act (JSCI 1382.4A)*.

All existing and proposed LACIE documentation will be identified and correlated with the documentation tree (fig. 1) and subsequent breakdowns as depicted in figures 2 and 3.

**ORIGINAL PAGE IS
OF POOR QUALITY**

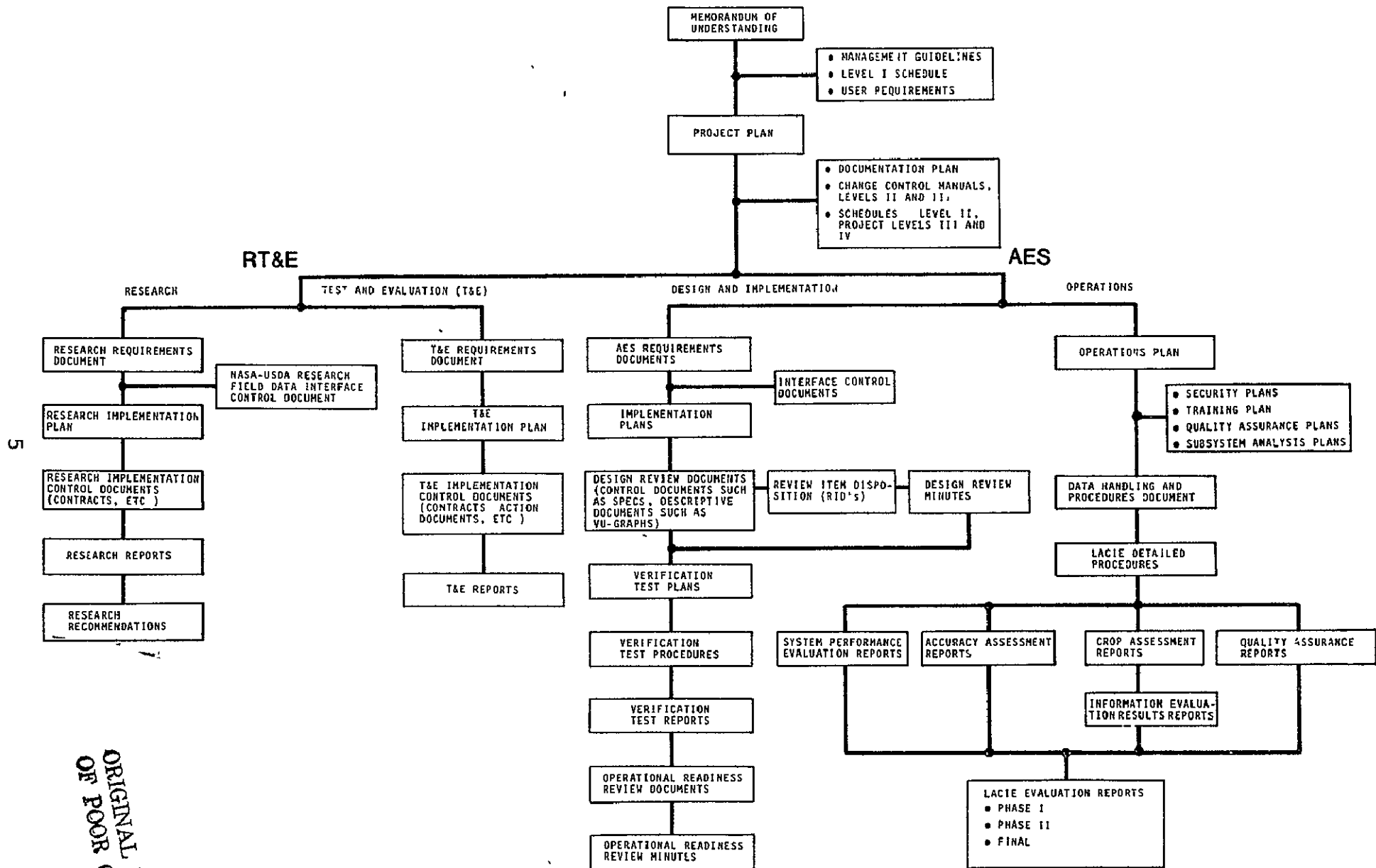


Figure 1. - Current LACIE documentation tree.

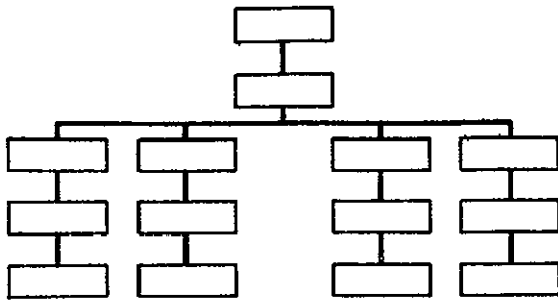
ORIGINAL PAGE IS
OF POOR QUALITY

A N S	UNITED STATES DEPARTMENT OF AGRICULTURE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	GENERAL		RESEARCH, TEST & EVALUATION (RT&E)		APPLICATION EVALUATION SYSTEM (AES)						
		RESEARCH	TEST & EVALUATION	DAPTS	ISRRS	CAMS	YES	CAS	OPERATIONS			
	CONCEPTUAL STAGE MEMORANDUM OF UNDERSTANDING MANAGEMENT GUIDELINES LEVEL 1 SCHEDULE USER REQUIREMENTS		A N S A, N, S A, N S A									
	DEFINITION STAGE PROJECT PLAN DOCUMENTATION PLAN CHANGE CONTROL MANUALS SCHEDULES LEVELS II III IV REQUIREMENTS DOCUMENTS		A N, S S S S									
	DEVELOPMENT STAGE IMPLEMENTATION PLANS INTERFACE CONTROL DOCUMENTS OPERATIONS PLAN SECURITY PLANS TRAINING PLAN QUALITY ASSURANCE PLANS SUBSYSTEM ANALYSIS PLANS IMPLEMENTATION CONTROL DOCUMENTS REPORTS RESEARCH RECOMMENDATIONS			S A N S	S A, N, S	S A N S	S A, N S	S A N S	N A, N S	A A N S	A A N S	S S S S
	DESIGN DOCUMENTATION DETAILED REQUIREMENTS DESIGN SPECIFICATION AND REVIEW DOC (HW/SW) TEST SPECIFICATION TEST REPORT USER DOCUMENTATION					S	S	S S S S S	N N N N N	A A, S A S A S A S		
	REVIEW ITEM DISPOSITIONS (RIDS) DESIGN REVIEW MINUTES VERIFICATION TEST PLANS & PROCS DATA HANDLING & PROCEDURES DOC			S	S	S S S	S S S	S S S S	S S N	S S A		S
	INTEGRATION AND TEST STAGE VERIFICATION TEST REPORTS OPERATIONAL READINESS REVIEW DOCUMENTATION LACIE DETAILED PROCEDURES					S	S	S	N	A		S S
	OPERATION STAGE SYSTEM PERFORMANCE EVALUATION REPORTS ACCURACY ASSESSMENT REPORTS CROP ASSESSMENT REPORTS INFORMATION EVALUATION RESULTS REPORTS											S A A S A S
	QUALITY ASSURANCE REPORTS LACIE EVALUATION REPORTS PHASE I PHASE II FINAL		A N, S A N S A, N S									S

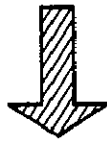
Figure 2. - LACIE documentation matrix - state/function/agency.

6 ORIGINAL PAGE IS OF POOR QUALITY

ORIGINAL PAGE IS
OF POOR QUALITY



DOCUMENTATION STRUCTURE



ANS	GENERAL	RESEARCH	TEST & EVALUATION	AES DESIGN & IMPL	AES OPERATIONS
CONCEPT STAGE	ANS				
DEF. STAGE	S		S		
DEVEL. STAGE			NA	S	
INT & TEST STAGE					
OPS STAGE	ANS				

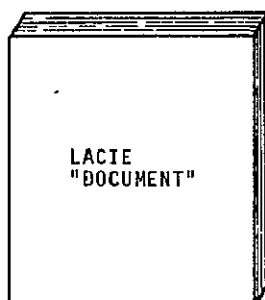
DOCUMENTATION MATRIX

DOCUMENT FAMILY			
TITLE	ID #	RESPONSIBLE ORG	DUE DATE

DOCUMENTATION FAMILY

TITLE
ID #
RESPONSIBLE ORG
PURPOSE & SCOPE
REVIEW & APPROVAL
RELATION TO STRUCTURE
SCHEDULE

DOCUMENT SUMMARY



DOCUMENT

Figure 3. - Evolution of a document.

4.0 LACIE DOCUMENTATION

Various types of documentation appropriate to each management level, from the Executive Steering Group (Level 1) down to and including the subelement functional managers, have been identified in the LACIE *Project Plan*. In addition, the project plan groups documentation into various classes in which each class fulfills a particular function and which can be related to a specific management level.

4.1 DOCUMENTATION LEVELS

Documentation appropriate to each of the management levels is defined as follows.

- A. Level 1 documentation deals with top-level executive policy, scope, guidelines, and interagency resolution functions.
- B. Level 2 documentation deals primarily with objectives, system performance, resources, configuration control, and major scheduled milestones at the agency project manager's level.
- C. Level 3 documentation deals with project implementation, integration, planning, budgeting, scheduling, and reporting at the LACIE manager's level.

- D. Level 4 documentation deals with the detailed technology development, implementation, and operation of the LACIE system at the functional manager's level.

4.2 DOCUMENTATION CLASSES

Documentation is grouped into various classes, each class fulfilling a particular function. These classes are as follows.

- a. Requirements - a document which defines the general or specific functions to be performed by project elements
- b. Plans - a document which defines objectives, scope, and technical approaches or a particular course or mode of action for accomplishing the specified requirements
- c. Task descriptions - a document concerned with a detailed description of the specific tasks to be performed
- d. Procedures - a document which outlines the methods and manner of initiating functions and defines the specific steps to be taken to accomplish an objective
- e. Instructions - a document that imparts guidance, information, and knowledge by a systematic method and furnishes authoritative orders or directions

- f. Reports - a document which describes technical accomplishments, progress, status, system performance results, and the utility of results

4.3 DOCUMENTATION TREE/MATRIX

4.3.1 Documentation Tree

A documentation tree (fig. 1) has been developed to provide a framework around which existing documents and documents that need to be produced are identified and oriented within the organizational and functional structure. The documentation tree will be expanded as additional documents are identified.

4.3.2 Documentation Matrix

A documentation matrix (fig. 2) which defines organizational responsibilities for documents and groups of documents identified in the documentation tree has been developed. The matrix organizes existing, planned, and recommended documentation by stage, function, and agency.

5.0 DOCUMENTATION CLASSIFICATION

Documents entered into the LACIE project documentation system will be classified as controlled, controlled distribution or noncontrolled, or if appropriate, will be classified for tracking purposes only.

By definition, "controlled" documents are those LACIE-generated documents which are designated or defined as baseline documents and are, therefore, subject to change control management. Certain documents, which are intended for internal LACIE use only, will be classified as "controlled distribution" documents. In addition, all LACIE materials which contain sensitive information as defined in the *LACIE Management Guidelines* will be classified as "controlled." Careful control will be implemented and maintained over the release and distribution of all such materials. Procedures and provisions for establishing and maintaining control of documents and the documentation numbering system are explained in detail in appendix A and appendix B.

The means by which classification of LACIE documentation is assigned and identified is as follows:

- a. Controlled or baselined documents - Controlled or baseline documents will be identified by the letter "C" prefix in the assigned LACIE number; i.e., LACIE-C00204.
- b. Controlled Distribution documents - Documents with

controlled distribution will be identified by the letter "CD" prefix in the assigned LACIE number; i.e., LACIE-CD00207.

- c. Noncontrolled or nonbaseline documents - Noncontrolled or nonbaseline LACIE documents will be identified by the assigned LACIE number only; i.e., LACIE-00205.
- d. Documents entered into the LACIE Level 3 documentation system for tracking purposes only, regardless of origin, will be identified by the letter "T" prefix in the LACIE number; i.e., LACIE-T00206.

6.0 DOCUMENTATION REVIEWS

Prior to submission for approval for publication and distribution, each LACIE Level 3 document will be reviewed and the contents concurred in by the functional supervisor or organizational manager of the activity generating the document. The objective of the review is to ascertain the technical integrity, suitability, feasibility, purpose, and applicability of the document to the LACIE project. The review will be performed by technically competent personnel who will evaluate the soundness of the technical approaches, if appropriate, and determine whether or not the objectives of the document impact LACIE material or manpower resources, schedules, budget, and performance.

The review level of each document will be dictated by the final approval authority required for that document. All LACIE Level 3 controlled or baseline documents require the approval of the LACIE manager; therefore, review concurrence by the functional supervisor or organizational manager is required. All documentation generated at the LACIE Level 4 management level may be approved by the respective functional element manager, unless it is determined to be a controlled or baseline document. Further information pertaining to review requirements is contained in appendix A.

7.0 DOCUMENTATION DISTRIBUTION AND RELEASE

The manager of the Project Control Office (PCO) will determine the distribution of all LACIE documentation in accordance with instructions and guidelines contained in the references listed in section 11.0.

7.1 DISTRIBUTION OF CONTROLLED DOCUMENTS

Controlled documentation, such as those documents baselined into the Change Control Board (CCB) system and designated by "C" numbers, will be distributed by the PCO. The PCO will also act as the repository for all remaining copies after initial distribution.

7.2 DISTRIBUTION OF NONCONTROLLED DOCUMENTS

Noncontrolled documentation will be coordinated with the PCO for specified distribution by the Project Support Facility (PSF).

7.3 RELEASE OF DOCUMENTS

Each LACIE Level 3 document approved for publication and distribution will be released under one of the following definitions:

1. Unlimited distribution (UD) - Documents which are considered to be under public domain jurisdiction

or which do not contain information that would restrict distribution in accordance with appropriate instructions and guidelines will be distributed to requestors without restriction.

2. Certified distribution (CD) – Documents containing sensitive LACIE information as defined in the LACIE *Management Guidelines* and other instructions will be released only by approval of the LACIE manager and only to such individuals who have been vouchered or otherwise authorized to receive such information.

To promote efficient and timely progress within LACIE, most information containing descriptions of technologies under development or research, experiment activities under investigation, or functional activities pertaining to the project should be available to all participants. However, many of the LACIE results are considered to be sensitive, particularly speculative information which could be related to future production and therefore of potential interest to investors in making investment decisions in the commodity markets. This also applies to information which could be interpreted to have economical or political connotations or implications.

Because of these considerations, release and distribution of LACIE information considered to be sensitive will be

restricted. The type of LACIE information classified as being sensitive is that information which discloses or portrays:

- a) The exact geographical location of each sample segment
- b) Specific details of acquisition; i.e., date of acquisition
- c) Aggregated results pertaining to acreage, yield, and production
- d) Yield estimation produced by agro-met yield models
- e) Proportion estimation information from CAMS (Classification and Mensuration Subsystem)
- f) Information containing any parts or combination of parts of the above

All LACIE Level 3 generated documentation containing information of the type categorized above, either in narrative form, schematically, mathematically, or by display or illustration, will be released only in accordance with the CD procedures.

The restrictions above will apply during the period of time this type of LACIE information remains useful for exploitation by speculators or manipulators. Because most of the LACIE data is time-related, its value as a speculative

tool, and therefore its sensitivity, will only last for a specific period of time. These time periods are defined and stipulated in the *LACIE Management Guidelines* and will be adhered to. Within these constraints and after the elapse of the specified time, the restrictions on release and distribution will be considered on a case-by-case basis.

8.0 DOCUMENT STATUS AND TRACKING SYSTEM

The purpose of the Document Status and Tracking System (DSTS) is to monitor the life cycle of all LACIE Level 3 generated documents. The system is intended to provide all organizations, functional elements, and personnel involved in the project at the LACIE Project 3 management level with timely and accurate information on the status of documentation through the initiation, development, schedule compliance, processing, publication, and distribution stages. Inputs to the system and responses from cognizant personnel and responsible organizations on a continuing basis are essential and necessary.

The DSTS is further intended to provide all levels of management with information pertaining to LACIE documentation requirements and schedules that reflect problem areas and highlight functions and activities requiring management attention.

To facilitate the status and tracking functions, a master list of all levels of LACIE documents will be established and maintained by the PCO. This list will be baselined and any changes, deletions, or additions to this baseline list will be processed in accordance with the procedures defined in the LACIE Level 3 *Change Control Procedures Manual* (ref. 4).

The operational procedures and the step-by-step methods used in statusing and tracking LACIE Level 3 documentation are defined in appendix D. Documents of a routine nature, such as inter-office memoranda, progress reports, or office correspondence, are excluded from this system.

9.0 FORMATTING

The overall guidelines set forth by the NASA technical publications published standards for style, paragraphing, tables, figures, and references will be adhered to where practical or appropriate. The *Style Guide for Large Area Crop Inventory Applications System Verification Test Project Documentation* (dated May 1974) provides the guidelines for use by authors of publications generated in the course of the LACIE investigations. The recommended format and general conventions of this style guide are amenable to use by the Administrative Terminal System (ATS).

In the event of conflicts between the recommended format and the standards published by NASA/Lyndon B. Johnson Space Center (JSC), the NASA/JSC published standards will take precedence. The purpose of these guidelines is to define the writing, editing, and copy preparation of technical documents; to establish a standard format; to achieve clarity of exposition; and to achieve uniform usage of those elements common to many types of documents. The use of these guidelines in document preparation will reduce or eliminate reformatting problems.

10.0 NUMBERING

Numbers are assigned to LACIE documents to identify them; to facilitate documentation change control; to provide a means of accounting for, tracking, statusing, and retrieving those documents which have been entered into the LACIE project documentation system; and to aid in the control of their release and distribution.

All LACIE documents initiated internally by any LACIE Level 3 project elements which come within the scope of this plan and those LACIE-related documents originated by organizations and activities external to the purview of the LACIE manager and entered into the DSTS will be given an identifying LACIE number by the PCO.

At the same time that the LACIE identification number is assigned to a document generated internally by LACIE Level 3 project elements, a NASA/JSC number will also be assigned in accordance with the provisions contained in JSCI 2314.2A (*Identification of JSC-Prepared and -Approved Scientific and Technical Documents*). The PCO will obtain a JSC number for the document from the JM2/center data manager prior to its being printed.

The only exception to the assignment of a JSC identifying number to a LACIE document will occur when that document is considered to contain sensitive LACIE information as defined in section 7.3 and is to be released in accordance with the CD procedures.

The procedures and guidelines for numbering LACIE documents are detailed in appendix A and appendix B.

11.0 REFERENCES

1. LACIE Project Interagency Memorandum of Understanding, Oct. 10, 1974.
2. LACIE Management Guidelines, Nov. 11, 1974.
3. LACIE Project Plan (Preliminary), Mar. 1975.
4. The LACIE Level 3 Change Control Procedures Manual.
5. Identification of JSC-Prepared and -Approved Scientific and Technical Documents, JSCI 2314.2A.
6. Freedom of Information Act, JSCI 1382.4A.

APPENDIX A

LACIE LEVEL 3 DOCUMENTATION SYSTEM PROCEDURES

APPENDIX A

LACIE LEVEL 3 DOCUMENTATION SYSTEM PROCEDURES

These procedures will present a step-by-step flow of a document entering the LACIE Level 3 system. Explanations of each step have been keyed to the appropriate block on the flow diagram (fig. A-1).

Block ① - LACIE Level 3 external document - This block represents a document which has been generated and printed external to JSC. It contains LACIE information and will be sponsored into the LACIE 3 documentation system by the responsible JSC LACIE branch or office manager. Normally, the document will have the originator's tracking number assigned. The document will flow to Block ③.

Block ② - LACIE Level 3 internal document - This block will be how the majority of documents will enter the LACIE system. These documents are review draft documents which have been generated by LACIE personnel or by LACIE contractors at JSC and will flow to Block ③.

Block ③ — Responsible LACIE branch or office manager —
The branch or office managers are identified as the staff personnel representing the various branches or offices in LACIE. They will include the PCO, the Facilities Support Office (FSO), Application Evaluation System (AES), and Research, Test, and Evaluation (RTE) managers. Included in this group will also be the USDA and NOAA senior representatives on the project staff at JSC. These managers will review all proposed LACIE documents which are in the area of their responsibility to ensure the accuracy of the technical content of the document and its applicability to the project. They will also provide a recommended distribution list to the PCO when the document is forwarded to Block ④.

Block ④ — The Project Control Office — The PCO manager will act as the prime coordinator for all documents received for entry into the LACIE system from the branch or office managers. The initial action the PCO manager will take is to obtain from the Project Management Team (PMT), Block ⑤a, a determination of the document's release classification. (Release classes are annotated and defined on the flow chart.) If the PMT decides

that Level 1 or Level 2 approval signature is required the PCO will forward the document as depicted in Block (5b). The document will then flow through one of three paths as follows:

1. If the document was externally generated and approved by the PMT for release into the LACIE system, it will be assigned a tracking number which will be stamped on all copies by the PCO as depicted in Block (6). All copies will be forwarded to the FSO, Block (7), who will distribute copies to persons on the distribution list recommended by the branch or office manager. Undistributed copies will remain on file in the FSO repository.

2. If the PMT declares that the document will require certified handling, it will, as depicted in Block (8), be logged into the system by PCO. A CD list and signature approval page will be obtained. The material will be forwarded to the "Green Room," Block (9) for reproduction and distribution. Undistributed copies will be maintained under controlled conditions in the "Green Room."

Block (10) - "Green Room" - This block shows a sample of the type of information which will be controlled in

the "Green Room" operation. Aggregated crop reports for yield, acreage, and production are classical "Green Room" outputs.

3. Internally generated documents which have not been designated for CD will flow through Block (11). The PCO will obtain approval signature, determine the configuration status of the document (will it be baselined into the Change Control System?), and obtain approved distribution.

Block (12) - The Change Control Board - The document to be entered into this system will require a Request for Experiment Change Proposal (RECP) and a Change Control Board Directive (CCBD) approved by the project manager to baseline it into the CCB system. The PCO manager will provide assistance to the document sponsor in preparing the RECP. The configuration controlled document will rejoin the flow at Block (13).

Block (13) - Technical Publications - This group will perform a final edit, compile the document masters, and prepare a Linolex or an ATS tape copy of the master as directed by the PCO.

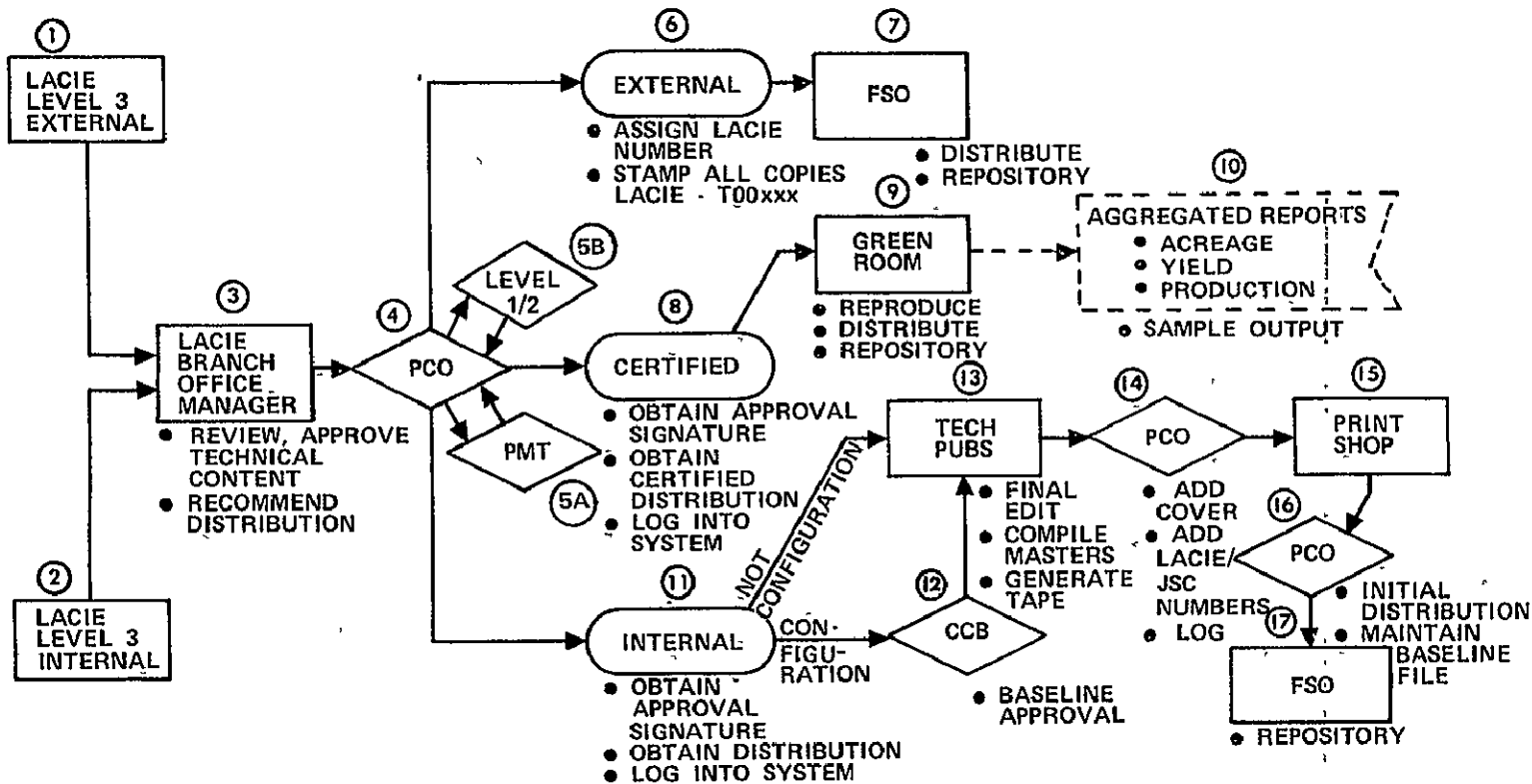
Block (14) - Project Control Office - The PCO will receive the document masters from the Technical Publications group and add the LACIE cover and LACIE

tracking number to the document. The NASA (JSC) number will also be added at this time.

Block (15) - Print Shop - The print shop will print the required number of copies as directed.

Block (16) - Project Control Office - The PCO will obtain all copies from the print shop, make initial distribution, retain a baseline copy, and authorize subsequent distribution in accordance with guidance received from the PMT.

Block (17) - Facilities Support Office - The FSO will become the repository for undistributed copies.



RELEASE CLASSIFICATION
UNLIMITED DISTRIBUTION - (UD) - MAY BE RELEASED TO ANYONE
CERTIFIED DISTRIBUTION - (CD) - TO BE RELEASED ONLY BY APPROVAL OF THE PROJECT MANAGER ONLY TO INDIVIDUALS WHO HAVE BEEN VOUCHERED TO RECEIVE SUCH INFORMATION

Figure A-1. -- The LACIE Level 3 documentation system.

ORIGINAL PAGE IS
 OF POOR QUALITY

APPENDIX B

LACIE LEVEL 3 DOCUMENTATION NUMBERING

APPENDIX B

LACIE LEVEL 3 DOCUMENTATION NUMBERING

The LACIE PCO is the only organization authorized to issue tracking or identification numbers for LACIE Level 3 documents. Since the number will be imprinted on the LACIE document cover, the PCO will maintain the original and all copies of LACIE document covers. A completed cover with title and number will be supplied by the PCO during the normal flow of a document into the LACIE Level 3 system as specified in appendix A.

The following numbering scheme will be used for LACIE Level 3 documents.

1. Categories - The third digit of the five-digit number will define the category of the document. Three open blocks have been established for categories which may be subsequently identified. The letter "C" will prefix controlled documents, the letters "CD" will prefix controlled distribution documents, and the letter "T" will prefix documents which are numbered for tracking purposes only.

CATEGORIES

INSTRUCTIONS - 00100
REQUIREMENTS - 00200
TASK DESCRIPTIONS - 00300
REPORTS - 00400
STUDIES - 00500
PLANS - 00600
PROCEDURES - 00700
OPEN - 00800
OPEN - 00900

EXAMPLES

<u>PROJECT</u>	<u>CATEGORY</u>	<u>EXPLANATION</u>
LACIE -	00100	- This number has been assigned to a noncontrolled instruction.
LACIE -	C00200	- This number has been assigned to a baselined (controlled) requirements document.
LACIE -	CD00501	- This number has been assigned to a controlled distribution study, which will have limited distribution due to the expense involved in producing each copy.
LACIE -	T00407	- Assigned to an IBM-generated report which has been entered into the LACIE system for tracking purposes.

APPENDIX C

LACIE LEVEL 3 DOCUMENTATION REPORT

APPENDIX C

LACIE LEVEL 3 DOCUMENTATION REPORT

A periodic report of the documents which have been entered into the LACIE Level 3 document system will be prepared and distributed by the PCO as directed by the PMT.

The report will be in machine accounting format.

An explanation of the report keyed to the headings in table C-I follows.

- 1 Doc. No. -- Document number; the alphanumeric assigned to the document by the PCO when it entered the system.
- 2 Title -- An abbreviation of the document's title.
- 3 Date -- The date the document was published.
- 4 Remarks -- Pertinent remarks about the document, such as the number of copies distributed, location of undistributed copies, and other appropriate information.
- 5 Baselined -- An indication of the configuration baseline status of the document.

TABLE C-I. -- LACIE LEVEL 3 DOCUMENTATION REPORT

1 DOC. NO.	2 TITLE	3 DATE	4 REMARKS	5 BASE- LINED
00100 REVC	INSTRUC PREP OF REQ DOC	20 DEC 4	ASVB NO DIST LIST	NO
00101	INSTRUC PREP OF IMP PLANS	20 DEC 4	ASVB NO DIST LIST	NO
00102	INSTRUC PREP OF ASVB PLAN	31 JAN 5	ASVB NO DIST LIST	NO
00200 IA	DAPTS REQ DOC ERTS	16 DEC 4	PARTIAL DIST LIST	YES
00200 IB	DAPTS REQ DOC FIELD	16 DEC 4	PARTIAL DIST LIST	YES
00200 IC	DAPTS REQ DOC HISTORY	16 DEC 4	PARTIAL DIST LIST	YES
00200 ID	DAPTS REQ DOC REAL TIME	16 DEC 4	PARTIAL DIST LIST	YES
T00407	LACIE ADP TECH INFO		26 COPIES	NO
T00608	GSFC CONTINGENCY PLAN - LACIE 2 (IBM REPORT)		20 COPIES	NO

C-2

, APPENDIX D

LACIE LEVEL 3 DOCUMENT STATUS
AND TRACKING SYSTEM

APPENDIX D
LACIE LEVEL 3 DOCUMENT STATUS
AND TRACKING SYSTEM

The DSTS will cover the evolution of all LACIE documents generated by any of the LACIE Level 3 project elements from the time of initiation, through the development and review stages, to the point where the documents are presented to the PCO for entry into the LACIE Level 3 documentation system. This includes coordination, scheduling, tracking, statusing, and reporting of the document throughout all phases of development.

The LACIE documentation matrix (fig. 2, section 3.0) will be used as a guide to initially ascertain which documents should be generated or which are to be considered as candidates for entry into the system. The PCO will perform a continuing survey of each LACIE functional element and subsystem to identify the documents already in the system, documents in preparation, and those planned to be generated and entered into the system. The results of each survey will be recorded on the form depicted in table D-I, and this record will be used to initiate status and tracking of these documents.

All documents to be entered into the LACIE Level 3 documentation system will be tracked, statused, and coordinated in accordance with the following procedures. A step-by-step flow of how a document is processed into the system is shown in figure D-1. Explanations of each step have been keyed to the appropriate block in the flow diagram.

- Step 1 - This line represents the survey activity performed by the DSTS with the LACIE Level 3 functional elements and subsystems. Schedule integration with the LACIE project schedules will take place at this point.
- Step 2 - Documents that interleave with other components will be coordinated at this point. (Example)
- Step 3 - Signature approval and document level will be established at this point.
- Step 4 - Draft copy of the document will be submitted to the PCO. The PCO will initiate action to have sufficient project review copies prepared either by the NASA Print Shop or by contractor Technical Publications.
- Step 5 - Project review of all documents takes place at this point, update changes will be incorporated, and documents will be routed to the PCO. The

LACIE cover, signature sheet, and LACIE control number will be added.

Step 6 - The PCO will route completed documents to Technical Publications or to the print shop.

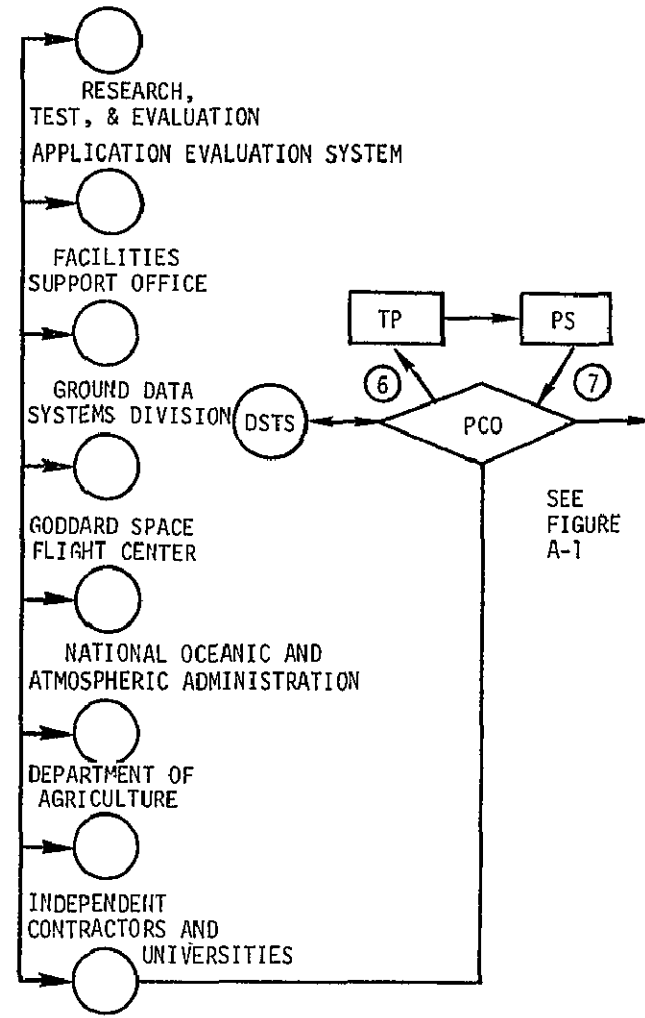
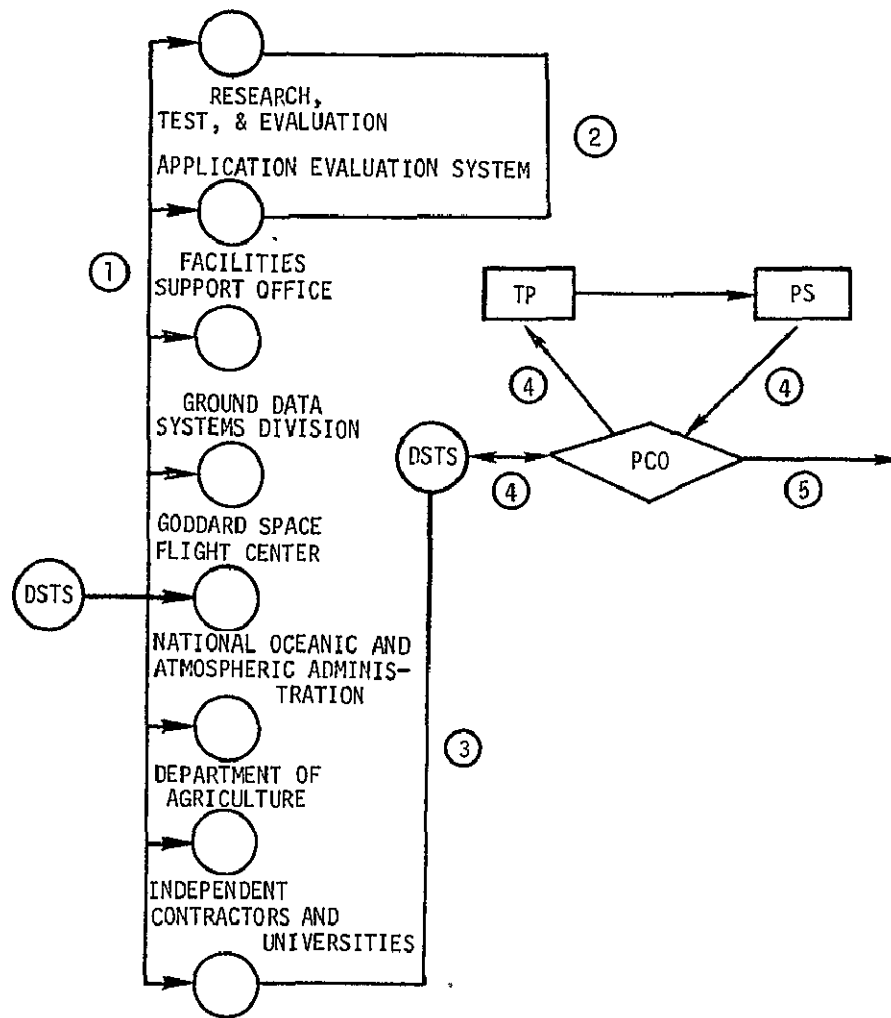
Step 7 - Print Shop flow of completed documents to the PCO takes place at this point for entry into the LACIE Level 3 documentation system.

NOTE: Documents classified as general correspondence (e.g., activity reports, trip reports, JSC interoffice memoranda) are not covered by this procedure.

D-4

DATE	ORIGINATING ORGANIZATION AND RESPONSIBLE INDIVIDUAL	TITLE	CATEGORY	DATE INITIATED	ESTIMATED DATE OF COMPLETION	LEVEL & NUMBER	COMMENTS

TABLE D-I. - IDENTIFICATION OF LACIE DOCUMENTS



ORIGINAL PAGE IS
OF POOR QUALITY

Figure D-1. - Documentation status and tracking flow chart.

APPENDIX E

LACIE ACRONYMS

LACIE ACRONYMS

ADP	automatic data processing
AES	Analysis Evaluation System
AGRO-MET	agricultural-meteorological
AI	analyst interpreter
ANOVA	analysis of variance
AOP	Analysis Operations Plan
ARC	Ames Research Center
ASAP	as soon as possible
ASCS	Agricultural Stabilization and Conservation Service
ASS	Applications Support Section
ASTEP	Algorithm Simulation Test and Evaluation Program
ASVB	Applications Systems Verification Branch
ATS	Administrative Terminal System
bpi	bits per inch
B/W	black and white
C&I	Cataloguing and indexing
CAG	Country Analysis Group
CAMS	Classification and Mensuration Subsystem
CAS	Crop Assessment Subsystem
CCB	Change Control Board; Configuration Control Board
CCBD	Change Control Board Directive
CCEA	Center for Climatic and Environmental Assessment (part of NOAA)
CCPM	Change Control Procedures Manual

CCS	crop condition survey
CCT	computer-compatible tape
CD	certified distribution.
CIR	color infrared
CITARS	Crop Identification Technology Assessment for Remote Sensing
COD	Center Operations Directorate
COM	computer output microfilm
CPU	central processor unit
CRD	crop-reporting district
CRT	cathode-ray tube
CSU	Colorado State University
DAL	Data Analysis Laboratory
DAO	Data Accounting Office
DAPTS	Data Acquisition, Preprocessing, and Transmission Subsystem
DAS	data analysis station
DCS	data collection station
DDC	Data Distribution Center
DPA	data processing analyst
DPCA	data production control analyst
DPPS	data processing production schedule
DPR	data processing request
DR	discrepancy report
DSAD	Data Systems Analysis Directorate
DSTS	Document Status and Tracking System

DTL	Data Technique Laboratory
EA	efficiency analysis
ECP	experiment change proposal
EDS	Electronic Data System
EDUI	Electronic Data Users Interface
E&D	Engineering and Development
EOD	Earth Observations Division
EOF	end-of-file
ERAS	Electronic Reports Accounting System
ERIM	Environmental Research Institute of Michigan, Ann Arbor, Mich.
ERIPS	Earth Resources Interactive Processing System
ERL	Earth Resources Laboratory (Mississippi Test Facility)
ERPO	Earth Resources Program Office
ERTS	Earth Resources Technology Satellite
ESSC	Environmental Studies Service Center
FAO	Food and Agricultural Organization
FAS	Foreign Agricultural Service
FDC	Federal Data Center
FML	Field Measurements Laboratory
FOD	Flight Operations Directorate
FRD	facilities requirements document
FSAS	field signature acquisition system
FSO	Facilities Support Office
FSOB	Facilities Support Operations Branch

FSS	field spectrometer system
Full-up system	system required for LACIE Phase II
GDSD	Ground Data Systems Division
GPSS	general-purpose systems simulator
GSC	geological survey chart
GSFC	Goddard Space Flight Center, Greenbelt, Maryland
GSR	Green Support Room (CAS staff of USDA and JSC)
ICD	interface control document
ICU	independent contractors and universities
ID	identification; internal distribution
IDSD	Institutional Data Systems Division
IE	information and evaluation
IES	Information Evaluation Subsystem
IMAGE 100	Interactive Multispectral Image Analysis System, Model 100
IMS	Information Management Subsystem
I/O	input/output
IRN	interface revision notice
ISOCLS	Iterative Self-Organizing Clustering System
ISRRS	Information Storage, Retrieval, and Reformatting Subsystem
ISS	intensive study site
ITOS	Improved Technology Operations Satellite
ITS	improved technology satellite; intensive test site
JOG	joint operations graphic-air
JSC	Lyndon B. Johnson Space Center

KSU	Kansas State University
LACIE	Large Area Crop Inventory Experiment
LACIE PO	LACIE Project Office
LACIP	Large Area Crop Inventory Project
LAI	leaf area index
LANDSAT	Land Satellite (formerly ERTS)
LARS	Laboratory for Applications of Remote Sensing at Purdue University
LCE	LACIE change evaluation
LD	limited distribution
LDSS	LACIE data systems supervisor
LOH	LACIE operations handbook
LOS	LACIE operations supervisor
LPDL	LACIE physical data library
MLA	mean level adjustment
MPAD	Mission Planning and Analysis Division
mse	mean square error
msr	mean square root
MSS	multispectral scanner
MTF	Mississippi Test Facility
MTU	magnetic tape unit
NASA	National Aeronautics and Space Administration
NCC	National Climatic Center
NDPF	NASA Data Processing Facility
NESS	National Environment Satellite Subsystem
NMC	National Meteorological Center

NOAA	National Oceanic and Atmospheric Administration
NSTL	National Space Technology Laboratories
NTTF	Network Test and Training Facility
OCC	Operations Coordination Center
ONC	operational navigation chart
PAS	Performance Assessment Staff; Performance Assessment Subsystem
PCR	project certification review
PDL	Physical Data Library
PDR	problem defect report
PDUI	physical data user interface
PFC	production film converter
PFS	Production Film System
PI	photointerpreter; photointerpretation; principal investigator
pixel	picture element
PMC	probability of misclassification
PMSE	proportional mean square error
PMT	Project Management Team
PPS	probability proportional to size
PRCB	Project Requirements Control Board
PSF	Project Support Facility
PSO	Project Support Office
PTD	Photographic Technology Division
PTL	Photographic Technology Laboratory
QA/QC	quality assurance/quality control
R&D	research and development

RECP	request for experiment change proposal
RGDS	Report Generation and Dissemination Subsystem
RID	Review Item Disposition
RTCC	Real-time computer complex
RTEB	Research, Test, and Evaluation Branch
S&AD	Science and Applications Directorate
SCN	specification change notice
SET	Systems Engineering Team
SPE-EA	Systems Performance Evaluation - Efficiency Analysis
SPE-RI	Systems Performance Evaluation - Reports Integration
SMF	Systems Management Facility
SR	scanning radiometer
SRS	Statistical Reporting Service (part of USDA)
SR&T	Supporting Research and Technology
s/s	subsystem
SSDA	Sequential Similarity Detection Algorithm
TAMU	Texas A&M University
TBD	to be determined
T&E	test and evaluation
TES	Test and Evaluation Section
TLU	table look-up
TMSPECT	truck-mounted spectrometer
TPC	tactical pilot chart
TSO	time sharing
UCB	University of California at Berkeley

UH University of Houston
USDA United States Department of Agriculture
USEP universal screening and editing program
UTD University of Texas at Dallas
VTPR vertical temperature profiling radiometer
WKSU West Kentucky State University
WMO World Meteorological Organization
YES Yield Estimate Subsystem
YS yield stratum

