DOCUMENT NUMBER VOY-CO-FR **28** July 1967

# VOLUME 5 DATA MANAGEMENT STUDY

# APPENDIX **E**CONTRACTOR DATA PACKAGE QUALITY ASSURANCE (QA)

PRE PARED BY

T.F. SMYTH
J.R. GOTTSHALL

QUALITY ASSURANCE MANAGEMENT VOYAGER SPACECRAFT SYSTEM PROJECT APPROVED BY

A. Frank, Cognizant Engineer
Data Management and Control Task
Voyager Spacecraft System Project

PREPARED FOR

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
4800 OAK GROVE DRIVE
PASADENA, CALIFORNIA

Under JPL Contract No. 951112



Valley Forge Space Technology Center P.O. Box 8555 • Philadelphia, Penna. 19101

## TABLE OF CONTENTS

Section	1	Page
1	INTRODUCTION	. 1-1
2	DATA ITEM LIST/USER MATRIX.	. 2-1
3	USER FLOWDIAGRAMS	<b>3-1</b>
4	DATA REQUIREMENT DESCRIPTIONS (DRD'S)	. 4-1
5	DOCUMENTATIONRELATIONSHIPTREES	. 5-1
6	DATA ITEM PHASING/FREQUENCY	• 6-1

#### INTRODUCTION

This appendix presents the Contractor Data Package (Data Item Matrix, Data Requirement Descriptions, User Flow Diagram, Document Relationship Tree, and Frequency and Phasing Charts) for Quality Assurance (QA).

These data include control and review procedures to ensure that component, subsystem, and system design, manufacture, assembly, and testing will produce items that meet the established specifications. This category also includes manufacturing verification tests to obtain quality assurance.

The complete list of Contractor Data Package appendixes is-as follows:

```
Appendix A - Technical Description and System Engineering (SE)
```

Appendix B - Planetary Quarantine (PQ)

Appendix C - Manufacturing (MG)

Appendix D - Configuration Management (CM)

Appendix E - Quality Assurance (QA)

Appendix F - Test (TE) and Mission Operations (MP)

Appendix G - Reliability Assurance (RA)

Appendix H - Logistics and Support (LS)

Appendix I • Overall Management (MA), Scheduling (SC), Manning and Financial (MF)

Appendix J - Procurement and Contracting (PC)

Appendix K - Data Management (DM)

Appendix L\* - Facilities (FA)

Appendix M\* - Safety (SA)

Appendix N\* - Site Activation for Launch (AL)

Appendixes L through Q prepared under Contract NAS 7-584

Appendix O\* - Science (SI)

Appendix P\* - Related Project Interfaces (RP)

Appendix Q\* - Advanced Missions (AM)

<sup>\*</sup> Appendixes L through  $\it Q$  prepared under Contract NAS 7-584

	1 of 4	
DATA ITEM NUMBER	DATA ITEM  QUALITY ASSURANCE	DESCRIPTION
	MANUALS	
QA- 003	Manual, Instrument Calibration and Maintenance	An approved set of procedures for calibration cycle instruments so that reliable data and confidence can ting procedure.
QÁ- 004	Manual, Quality Assurance Operating Procedures	Formalizes the specific requirements of the Quality established operations procedures.
QA- 005	Manual, Special Test Equipment, Component	Controls and maintains the equipment current, nece formance requirements.
QA 006	Manual, Workmanship Standards	Provides visual aids and standards jointly selected I for use during the program.
	MINUTES	
QA- 007	Minutes, Material Review Board	Minutes of formal meetings of the Material Review I
	PLANS_	
QA- 008	Plan, Inspection	Documents the specific parameters of inspection and the required quality levels in fabrication, assembly,
<b>QA-</b> 009	Plan, Quality Assurance Program	The system contractor's total quality plan which med tractual requirements.
QA- 010	Plan, Sampling	Documents and controls the sample size necessary t quality levels.
QA- 011	Plan, Test and Operating, for Special Test Equipment (STE), Component	A detailed checkout and operating procedure for test grity and confidence in the test results. In process checkout equipment.

<sup>\*</sup> KEY INFORMAL DATA

## .DATA ITEM LIST/USER MATRIX

						Δ	PPLI	CABI AT	LITY CON	TO ΓRAC	FUNC TOR	CTIOI LEV	NAL EL	USER	S	
	SE	PQ	MG	СМ	QA	TE	RA	LS	ма	sc	PC	ИF	MP	DM	FA	SA
	-															
and maintenance cycles for be maintained in the opera-				-	A	U	-	_	-	-		-	-	_	_	-
Assurance Plan into	-	-	U	_	A	U	U	-	-	-	-	_	_	_	_	U
sitated by design and per-	-	_	-	-	A	Ū	-	_		_	-		-	_	_	-
7 contractor and customer	_	_	A	-	R	_	U	-	-	-	_		-	-	-	_
:																
												<del></del>				
oard (MRB).	U	-	U	_	R	U	U	_	U	_	U	-	_	-	-	_
												<u></u>				
the tolerances to maintain and configuration.	-	-	U	-	A	σ	-		U	_	-		-	-	-	_
ts all the customer con-	U	U	U	-	R	U	R	-	РМ		U	_	_	-	-	1
ı maintain acceptance	U	U	U	-	A	-	U	_	_	_	-	_	-	_	-	-
equipment to maintain inte- est of hardware using bench	U	-	_	-	A	R	U	_	_	-		_	-	-	-	U

U - USE R - REVIEW AUTHORITY A - APPROVAL AUTHORITY

			<del>-17</del>	APP	CABII	_ITY A	T SU	BCONT	RAC-		Λ P	PLIC	A RII	ITV	TO B	PO IE	,,	<del></del>	ne	_
				TOF		· · · · · · · · · · · · · · · · · · ·	PPLIE	R LE	VELS	7	,	, LIC	JIL			NOJE	-01 6	JOAR	J.3	
AL	SI	RP	АМ	PRINCIPAL SUB- CONTRACTORS	MAJOR SUB- CONTRACTORS	KEY SUBCON AND VENDORS	OTHER VENDORS	KEY SUPPLIERS	KEY SUBSUPPLIERS	CONFIGURATION CONTROL	CONFIGURATION MANAGEMENT	DATA REVIEW	DESIGN REVIEW	FAILURE REVIEW	INTEGRATED SAFETY	INTEGRATED TEST	MAKE OR BUY	MATERIAL REVIEW	SOURCE EVALUATION	SOURCE SELECTION
										*					-			į		
U	-	- :	-	s	S	S	NA	NA	NA	_	-	_	-	-	-	-	-	-	-	
U	-	•		C/S	C/S	(C/S)	NA.	 (C/S) 	NA.	-	-	-	1	-	<u>-</u>	-		_	-	
U	-	-	-	s	S	ន	NA	NA	NA	-	-	-	<b>-</b>		-	-	-		_	_
U	-	_	_							_		_		1		U	-	-	_	-
									٠											
	ŧ													-						
	-		-	(S)	(S)	(S)	NA	(S)	NA			-	-	· . <b>_</b>	_	U		A		-
										:						:				
,																				
	_		_	s	s	s	NA	(S)	(S)	-	_	-	-	_	_		-	_	_	-
U	U		_	s	s	s	s	s	s	_	-	_	_	_	_	-	<b></b>	-	-	_
_	_		-	s	s	s	s	s	s	-	-	-	_		-	U	_		_	_
	U	_	-	s	S	(S)	NA	NA	NA	_	_		_	_	_	R	_	_	_	_

<sup>-</sup> PREPARED BY CONTRACTOR

QUALITY ASSURANCE  PROCEDURES  QA- 012 Procedure, Process Control Procedure, Test/Inspection  QA- 013 Procedure, Rework  QA- 014 Procedure, Rework  QA- 015  RECORDS  QA- 016 Record, Calibration  QA- 017 QA- 018 Record, Tool and Gauge Usage  QA- 018 QA- 019 QA- 019 QA- 019 QA- 019 QA- 019 QA- 019 QA- 010 QA- 010 QA- 010 QA- 010 QA- 010 QA- 011 QA- 012 QA- 013 QA- 014 QA- 015 QA- 015 QA- 016 Record, Tool and Gauge Usage  QA- 017 QA- 018 QA- 019 QA- 019 QA- 019 QA- 010 QA- 010 QA- 010 QA- 010 QA- 010 QA- 010 QA- 011 QA- 010 QA- 010 QA- 010 QA- 010 QA- 010 QA- 011 QA- 010 QA- 010 QA- 010 QA- 010 QA- 011 QA- 010 QA- 010 QA- 010 QA- 010 QA- 011 QA- 010		2 of 4	
PROCEDURES  QA- 012 Procedure, Process Control Procedure, Process Control Procedure, Procedure, Specific test and inspection procedures to be contractor.  QA- 014 Procedure, Rework  QA- 015 Procedure, Area Control  RECORDS  QA- 016 Record, Calibration  QA- 017 Record, Shelf Life  QA- 018 Record, Tool and Gauge Usage  QA- 018 Record, Test {Materials, Parts, Sub-Assemblies}  QA- 010 Logbook, Component  A chronological and historical record used status, solving of anomalies and verifying a component reauirements.  To verify to the customer the chronological	ITEM	DATA ITEM	DESCRIPTION
QA- 012 Procedure, Process Control  QA- 013 Procedure, Test/Inspection  QA- 014 Procedure, Rework  QA- 015 Procedure, Area Control  RECORDS  QA- 016 Record, Calibration  QA- 017 QA- 018 Record, Tool and Gauge Usage  QA- 018 Record, Test {Materials, Parts, Sub-Assemblies)  QA- 010 Logbook, Component  QA- 011 Component reautirements.  A chronological and historical record used status, solving of anomalies and verifying a component reautirements.  Component reautirements.	<u> </u>	QUALITY ASSURANCE	
O12 Procedure, Process Control  QA- O13 Procedure, Test/Inspection  QA- O14 Procedure, Rework  QA- O15 Procedure, Area Control  RECORDS  QA- O16 Record, Calibration  QA- O17 Record, Shelf Life  QA- O18 Record, Tool and Gauge Usage  QA- O19 Record, Test {Materials, Parts, O19 Sub-Assemblies)  QA- O10 Logbook, Component  A chronological and historical record used status, solving of anomalies and verifying a component reauirements.  To verify to the customer the chronological and historical record used status, solving of anomalies and verifying a component reauirements.		PROCEDURES	
O13 Procedure, Test/Inspection Contractor.  QA- O14 Procedure, Rework  QA- O15 Procedure, Area Control  RECORDS  QA- O16 Record, Calibration  QA- O17 Record, Shelf Life  QA- O18 Record, Tool and Gauge Usage  QA- O19 QA- O19 Component Status, solving of anomalies and verifying a component reauirements.  Component requirements.  To verify to the customer the chronological		Procedure, Process Control	Essential process controls needed to supplement the procedure.
QA- 014 Procedure, Rework  QA- 015 Procedure, Area Control  RECORDS  QA- 016 Record, Calibration  QA- 017 Record, Shelf Life  QA- 018 Record, Tool and Gauge Usage  QA- 019 Record, Test {Materials, Parts, 019 Sub-Assemblies)  QA- 001 Logbook, Component A chronological and historical record used status, solving of anomalies and verifying a component reauirements.  To verify to the customer the chronological and historical record used status, solving of anomalies and verifying a component reauirements.		Procedure, Test/Inspection	Specific test and inspection procedures to be perfor contractor.
RECORDS  QA- 016  Record, Calibration  QA- 017  Record, Shelf Life  QA- 018  Record, Tool and Gauge Usage  QA- 019  QA- 010  Logbook, Component  A chronological and historical record used status, solving of anomalies and verifying a component requirements.  CA-  To verify to the customer the chronological and anomalical component requirements.	1	Procedure, Rework	
QA- 016 Record, Calibration  QA- 017 Record, Shelf Life  QA- 018 Record, Tool and Gauge Usage  QA- 019 Record, Test {Materials, Parts, Sub-Assemblies)  QA- 001 Logbook, Component A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  QA- 010 Record, Calibration  Record, Shelf Life  A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  CA-  To verify to the customer the chronological	1	Procedure, Area Control	
QA- 016 Record, Calibration  QA- 017 Record, Shelf Life  QA- 018 Record, Tool and Gauge Usage  QA- 019 Record, Test {Materials, Parts, Sub-Assemblies)  QA- 001 Logbook, Component A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  QA- 010 Record, Calibration  Record, Shelf Life  A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  CA-  To verify to the customer the chronological			
QA- 017 Record, Calibration  QA- 017 Record, Shelf Life  QA- 018 Record, Tool and Gauge Usage  QA- 019 Record, Test {Materials, Parts, 019 Sub-Assemblies)  A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  QA- 001  CA- CA- CA- CA- CA- CA- CA- CA- CA- CA		RECORDS	
QA- 018  Record, Shelf Life  QA- 018  Record, Tool and Gauge Usage  QA- 019  Record, Test {Materials, Parts, 019  Sub-Assemblies)  A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  To verify to the customer the chronological		Record, Calibration	
QA- O11  Record, Tool and Gauge Usage  QA- O12  Record, Test {Materials, Parts, Sub-Assemblies}  A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  To verify to the customer the chronological		Record, Shelf Life	
O19 Sub-Assemblies)  QA- O01 Logbook, Component A chronological and historical record used status, solving of anomalies and verifying a component reauirements,  To verify to the customer the chronological		Record, Tool and Gauge Usage	
Logbook, Component status, solving of anomalies and verifying a component requirements.  Component requirements.			
To verify to the customer the chronological		Logbook, Component	A chronological and historical record used in review status, solving of anomalies and verifying acceptanc component requirements,
002 Logbook, Vehicle for the vehicle presented for buy-off.	QA- 002	Logbook, Vehicle	To verify to the customer the chronological and history

<sup>\*</sup> KEY INFORMAL DATA

## DATA ITEM LIST/USER MATRIX

						A	PPLI	CAB AT	ILITY CON	TO TRAC	FUN TOR	CTIOI LEV	NAL I	USER	S	
	SE	PQ	MG	СМ	QA	TE	RA	LS	МА	sc	PC	MF	MP	DM	FA	SA
est and inspection		-	U	-	A	_	-	_	U	-	_	-	-	_	-	U
ed by the system		Ú	U	-	A	U	U	_	U	_	-	-	-	-	_	U
	-	_	U	_	A	-	-		-	-		-	-	-	_	-
	-	R	U	_	R	U	U	U	РМ	_	_	-	_	_	-	U
											Angle of the second					
	-	_	-	_	A	U	_	-	-	_	-	-	_	-	_	-
		U	U	_	A	U	U	_	_	-	_	-	_		-	-
	-	-	U	_	A	-	_	_	-	_	-	-	-	_	_	-
	-		U	-	A	U	-	-		-	_	-	-	_	_	-
ng component criteria for the	-	-	-	-	A	U	R	_	-	_	-		-	-	-	-
rical acceptance	U	-	_	-	A	R	R	R	R	_	U	_	U	-	_	-

U - USE

R - REVIEW AUTHORITY

A - APPROVAL AUTHORITY

<del></del>			<del></del>	APPL TOR/	ICABII	LITY A	AT SU	BCONT	RAC-		AP	PLIC	ABIL	ITY	TO F	PROJE	ECT I	BOAR	DS	
<del>- 1</del>				PRINCIPAL SUB- CONTRACTORS	MAJOR SUB- CONTRACTORS	KEY SUBCON AND VENDORS			KEY SUBSUPPLIERS	CONFIGURATION	CONFIGURATION MANAGEMENT			ш_	ATED Y	RATED	oR	IAL V	E	FION
AL_	SI	RP	AM	PRINCIF	MAJOR CONTR	KEY SU AND VE	OTHER VENDORS	KEY SUPPLIERS	KEY SUBSUR	CONFIG	CONFIG	DATA REVIEW	DESIGN REVIEW	FAILURE	INTEGRATED SAFETY	INTEGRATED TEST	MAKE	MATERIAL REVIEW	SOURCE	SOURCE SELECTION
-	1		-	s	S	S	(S)	s	(S)	-		1	•	-	1	-	-	U		-
_	-	-	_	s	S	S	(S)	S	(S)	<b>.</b>	-				-	U	<b>-</b>		_	-
	_	-	_	s	S	s	(S)	s	(S)		-	-	_	-	-	_		U		-
-	-	-	_	(S)	(S)	(S)	NA	(S)	(S)	-	_	.=	1	-		U	-	_	_	-
,														:						
	i i									·										
	_		_	S	s	s	(S)	(S)	(S)	-	_	-	-		-	U	-	_	_	-
	-	_	_	(S)	(S)	(S)	(S)	(S)	(S)	_	-	_	_	-	-	U	_	_	_	-
	-	-	_	(S)	(S)	(S)	ΝA	NA	NA	-	-	-	-	-	-	-	_	-	-	-
***	-		-	s	S	s	s	s	s	_	-		-	_	_ _	U	   	-	-	-
	_		_	s	s	s	s	s	s	-	-		-	-	_	U		_	-	-
	IJ	-	_	NA	NA	NA	ΝA	NA	ΝA	_	-	-	-	_	-	R	-	-	_	
										-										
	<u> </u>	L	L	L	L	L	L	Ļ.,	Ļ	L		L	1	نــــن		L	L	L	L	L

	3 of 4	
DATA ITEM NUMBER	DATA ITEM	DESCRIPTION
	QUALITY ASSURANCE	
	REPORTS	
QA- 020	*Report, Failure Analysis	Documentation of the investigatory analysis of nonciproblem cause, and prevention.
QA- 021	*Report, Nonconforming Material (NCMR)	A document to report nonconformance in fabrication assembly, and inspection and the cause, corrective and disposition.
QA- 022	*Report, Process Trends	Identifies shifts in quality levels during processes s corrective action can be taken.
QA- 023	*Report, Quality Audit	Measures the level of compliance in all areas of fab assembly and test to the governing quality document
QA- 024	*Report, Quality Status	A report of the system contractor's quality perform; submitted to the customer.
QA- 025	Report, Special Measurement and Test Equipment Evaluation (Component)	A special capability study of test equipment to verify and confidence in test and inspection results
QA- 026	Report, Quality Assurance Audit Summary	Summary of the audits verifying compliance in fabric testing, inspection, to specific control documents.
QA- 027	Report, Quality Assurance Trend Summary	Summarization of <b>QA</b> trend reports to determine any quality levels and to emphasize corrective action.
QA- 028	Report, Break of Inspection	Identifies the break of inspection event which causes processing to be stopped and verifies that all material a component is maintained as prime.
QA- 029	*Report, Failure Categorization	An analysis report categorizing failures and assigning for failures to design, component, fabrication, or te
QA- <b>03</b> 0	Report, Qualification Status	Reports the status of the type approval (TA) program customer.

<sup>\*</sup> KEY INFORMAL DATA

# DATA ITEM LIST/USER MATRIX

	u       u														S	
	SE	PQ	MG	СМ	QA	TE	RA	LS	мА	sc	РС	MF	МР	DM	FA	SA
formance,	u	u	U U	_	R	U	A	-	Ū	•	-		-	-	_	U
test, ction,	-		U	_	A	U	U		U		_	-	_	-	_	-
that	Ω	-	U		А	-	U		U	_	-	_	-	_	-	-
cation,	U	-	U	-	A	U	U	_	U	_	U	-	-	-	_	U
me	U	_	U	_	А	U	U	U	U	-	U	-	_	-	_	-
integrity	u	u	-	_	A	R	_		_		U	-	-	-	-	-
ution,	u	u	U	_	А	U	U	_	U	-	U	-	_	_	-	-
shifts in	U	  -	U		А	-	U	_	U	_	U	_	-	_	_	-
nardware l within		U	_	_	A	U	-	-	-	_	_	-	_		_	-
; responsibility t.		_	U	_	A	R	U	_	U	_	_	_	-	_	-	-
to the	Ū	-	U	-	A	R	U		U	-	U	_	-	-	_	-
			-			_										
						_										

U - USE

R - REVIEW AUTHORITY

A - APPROVAL AUTHORITY

PAGE NO. 3 of 4

				APPL TOR/	ICABI VEND	LITY A	T SUE	CONT	RAC- VELS	1	AP	PLIC	ABILI	ITY	TO P	ROJE	ECT E	BOARI	DS	
<del>:                                    </del>				PRINCIPAL SUB- CONTRACTORS	SUB- CTORS	SCON	S	ERS	PLIERS	JRATION L	RATION MENT				ATED	ATED	oR	AL.	TION	NOI
۱L	SI	RP	ΑМ	PRINCIPA CONTRA	MAJOR SUB- CONTRACTORS	KEY SUBCON AND VENDORS	OTHER VENDORS	KEY SUPPLIERS	KEY SUBSUPPLIERS	CONFIGURATION CONTROL	CONFIGURATION MANAGEMENT	DATA REVIEW	DESIGN REVIEW	FAILURE REVIEW	INTEGRATED SAFETY	INTEGRATED TEST	MAKE O BUY	MATERIAL REVIEW	SOURCE EVALUATION	SOURCE SELECTION
:						:										:	-			
U	U	-		S	s	s	NA	(S)	(S)	_	1	-	ł	R	-	U	-	U	-	-
U		-	1	S	S	S	s	s	, S	-	-	_	-	-		U	. <del></del>	U	-	
_		-	-	s	ន	(S)	ΝA	ΝA	ΝA	_	_	_		-	_		_	_		-
U	1	-	_	s	S	s	NA	(S)	ΝA	-		_		-	-	U	<b>-</b>	U	_	_
-	-	-	-	s	s	S	NA	(S)	NA	-	-	-	_	-	_	U	-	-	_	-
-		_	_	s	S	(S)	NA	ΝA	ΝA	-	-	-	_	_	-	U	_	-	-	-
-	_	_		NA	NA	ΝA	ΝA	ΝA	ΝA	-	-	_	_	-		_	-	U	_	-
U	-		-	NA	NA	ΝA	ΝA	NA	NA	-	-	-	-	-	_	-	_	-	-	-
-		_	_	s	s	s	NA	(S)	(S)	_	_		_	_	-	υ	-	_	-	-
u	_	-	_	s	s	S	NA	NA	NA	-	_	-	-	_	-	R	-	-	-	-
	_	_	-	(S)	ΝA	NA	NA	NA	NA	-	-	-		_	-	U		U	-	-

\_ PREPARED BY CONTRACTOR

S - PREPARED BY SUBCONTRACTOR/VENDOR/SUPPLIER ( ) - OPTIONAL APPLICATION NA - NOT APPLICABLE

	4 of 4	
DATA ITEM NUMBER	DATA ITEM  QUALITY ASSURANCE	DESCRIPTION
	SPECIFICATIONS	
QA- 031	Specification, Special Test Equipment (STE),. Component	

<sup>\*</sup> KEY INFORMAL DATA

## DATA ITEM LIST/USER MATRIX

						Δ	\PPLI(	CABI AT	LITY CON	TO TRAC	FUNC TOR	CTION	IAL I	JSER	s	
	SE	PQ	MG	СМ	QA	TE	RA	_s	ма	sc	PC	MF	MP	DM	FA	SA
		-					,									
7. V. V.	U	_		U	A	R	U	<u></u>	-	U	U	-	-	-	-	U
		-					······································									
						-		-								
		-					<del></del>									
								<del></del>								
								<del></del>								
								<del>,</del>								
								<del></del>								
			·   <del></del>				-									
	-															

U - USE R - REVIEW AUTHORITY

A - APPROVAL AUTHORITY

<del>, , , , , , , , , , , , , , , , , , , </del>				APPLICABILITY AT SUBCON' RACTOR/VENDOR/SUPPLIER IE-ELS						APPLICABILITY TO PROJECT BOARDS										
				PRINCIPAL SUB- CONTRACTORS	MAJOR SUB- CONTRACTORS	KEY SUBCON AND VENDORS			KEY SUBSUPPLIERS	CONFIGURATION CONTROL	CONFIGURATION MANAGEMENT	*	> *	*	INTEGRATED SAFETY	INTEGRATED TEST	OR	NAL W	SOURCE EVALUATION	TION
AL	SI	RP	АМ	PRINCI	MAJOR	KEY SI AND V	OTHER VENDOWS	KEY SUPPLIERS	KEY SUBSU	CONFIC	CONFIG	DATA REVIEW	DESIGN REVIEW	FAILURE	SAFET	INTEG TEST	MAKE OR BUY	MATERIAL REVIEW	SOURCEVALL	SOURCE SELECTION
<u> </u>		-			•											·				-
Y	U	-	-	S	s	(S)	NA	(S)	NA		U	_			1	R	-	•	-	-
									•			·								
										,				:						
	:						:			:										
													:							
:	and the second s									:										
			:					:												
	:	-		,			:	:	-		:				-					
									=							-		-		
									-											
									-											

<sup>-</sup> PREPARED BY CONTRACTOR

S - PREPARED BY SUBCONTRACTOR/VENDOR/SUPPLIER ( ) - OPTIONAL APPLICATION NA - NOT APPLICABLE

#### USER FLOW DIAGRAMS

The Quality Assurance Data User Flow Diagrams were developed to show the quality activities and required data items on Voyager to meet customer requirements (NPC 200-2, 3, 4) and the needs of a long-life space system quality program. Interfaces with the systems office, the contractor Voyager project, and procurement sources have been indicated from contract award through launch. The quality assurance data items shown in the diagrams agree with Voyager data item lists.

Early attention is devoted to the quality assurance program plan, conducting special quality system studies, and obtaining rapid integration of major subcontractor quality programs into the prime contractor quality assurance system; Continuous from the systems design phase through launch, key quality activities are:

#### SDR through PDR

- e Develop parts qualification plan
- e Review specifications and drawings
- e Initiate training program
- Monitor breadboard activities
- e Establish procurement source (supplier) evaluation system

#### PDR through HDR

- e Begin parts and process qualifications
- e Finalize Quality Assurance Operating Procedures Manual
- e Initiate component special test equipment design
- e Calibrate tools and gages
- e Continue certification of personnel
- Establish QA engineer residents at major subcontractors
- Monitor model fabrication and tests

#### MDR through CDR

- Continue test plan development
- Conduct failure analyses
- e Inspect engineering model procurement, fabrication and tests
- e Conduct audits

1

e Review purchase requisitions for TA and PTM hardware

#### CDR through FACI

- o Update procedures and processes
- o Update component STE
- o Continue STE, tool and gage calibrations
- Inspect TA and PTM fabrication and tests
- o Review process trends and conduct failure analyses
- o Compile documentation, including deviation data for FACI

### FACI through MAR

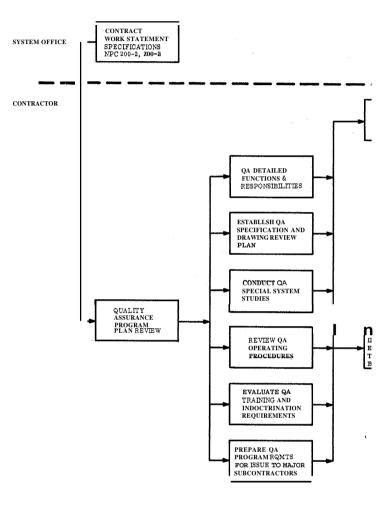
- o Prepare launch operations QA plan
- o Implement defect preventive measures evolving from FACI
- o Perform FA and OSE in-process inspection test and certification
- o Conduct failure analyses
- o Compile Mission Acceptance Review documentation
- o Review status of each vehicle

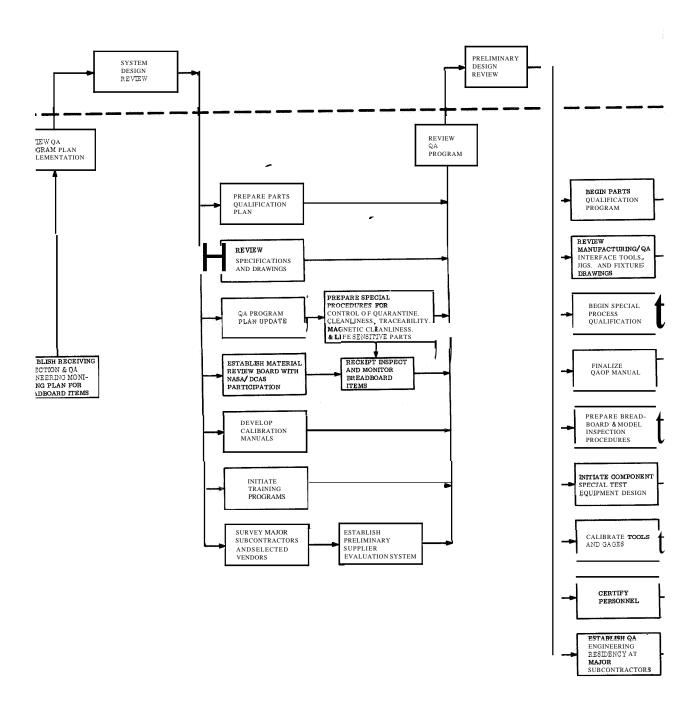
#### MAR through Launch

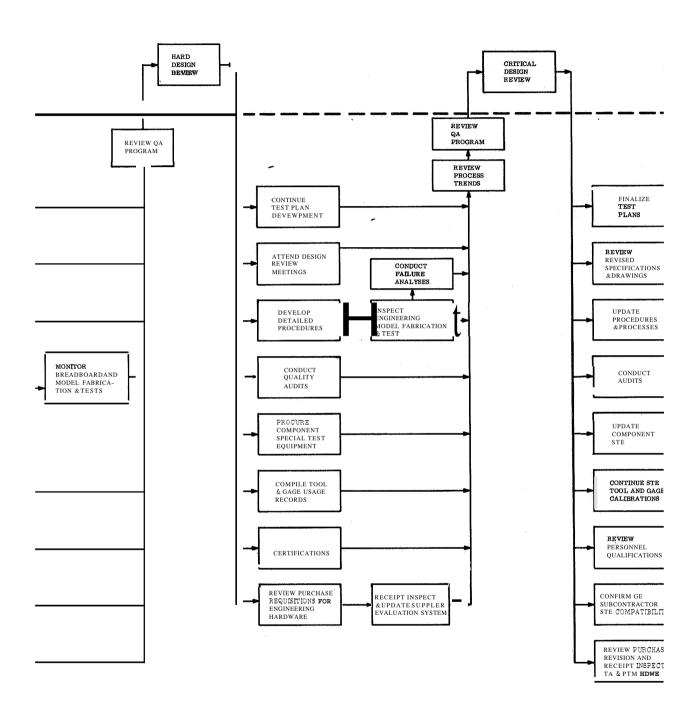
- o Inspect shipments of FA, OSE and STE
- o Receipt inspection at launch site
- o Monitor pre-launch tests
- o Provide QA data for problem solving areas

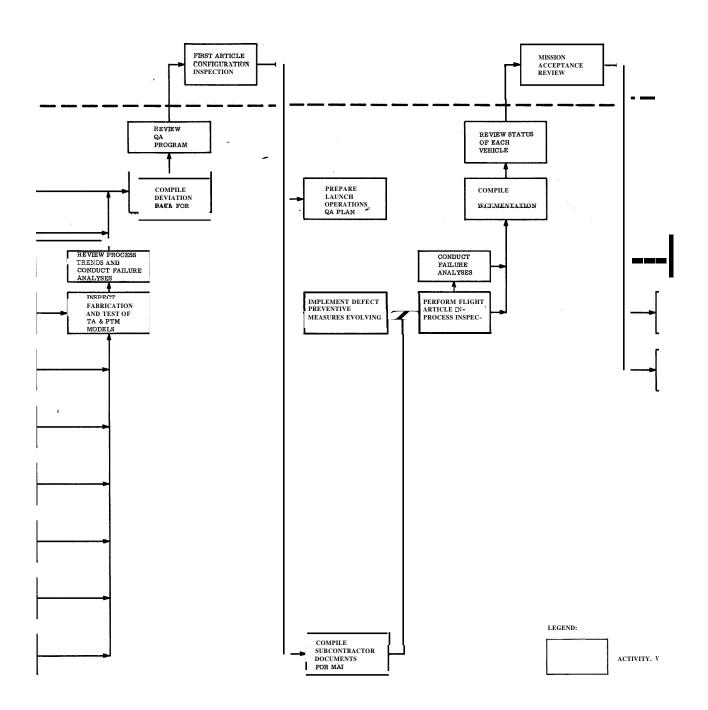
## Quality Assurance User Flow Diagrams

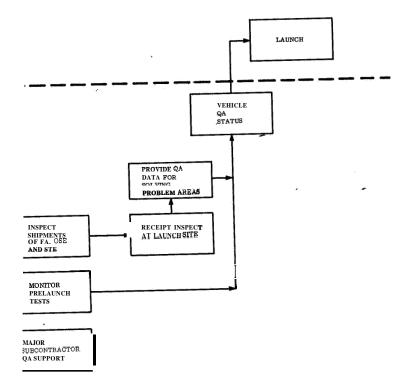
Figure Number	<u>Title</u>						
E-1	Quality Assurance User Flow Diagram - Summary						
E-2	Quality Assurance User <b>Flow</b> Diagram — Contract Award Through Preliminary Design Review						
E-3	Quality Assurance User Flow Diagram - Preliminary Design Review Through Critical Design Review						
E-4	Quality Assurance User, Flow Diagram — Critical <b>Design</b> Review Through Launch (2 sheets)						







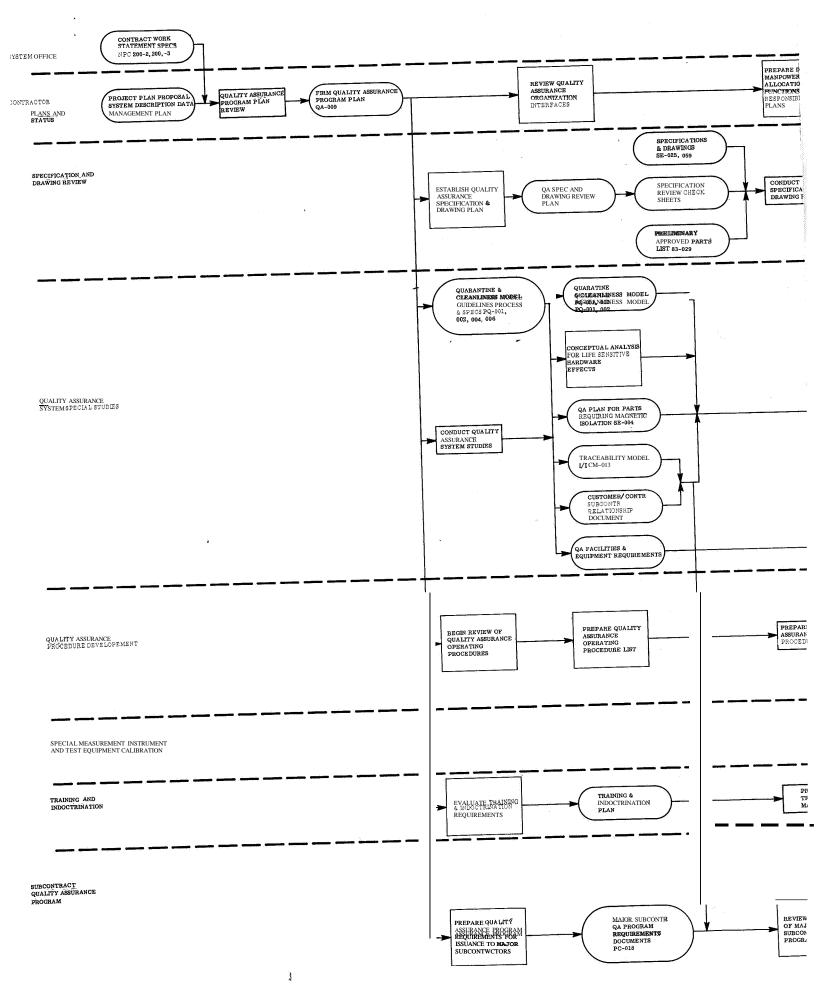


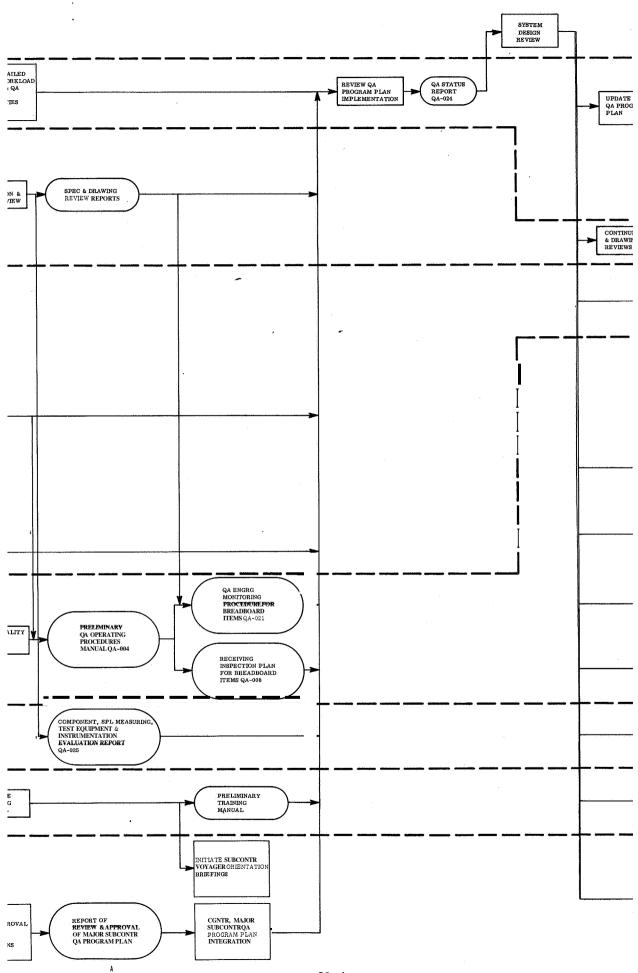


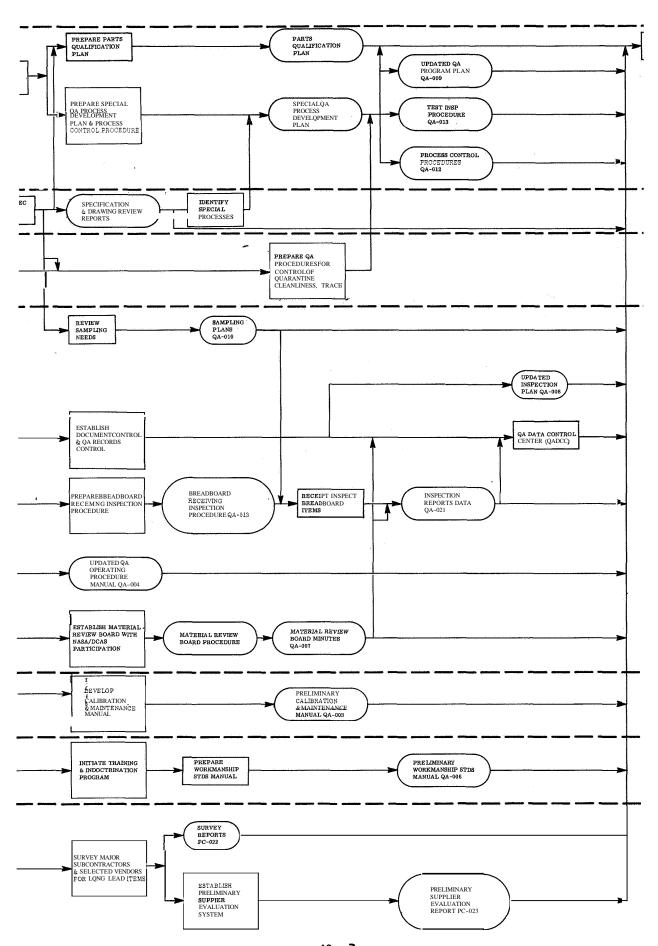
TITH DESCRIPTION INSIDE

Figure E-1. Quality Assurance User Flow Diagram - Summary









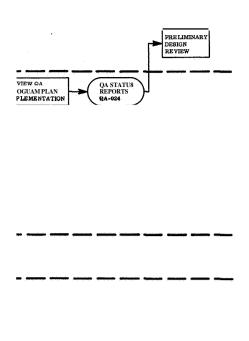
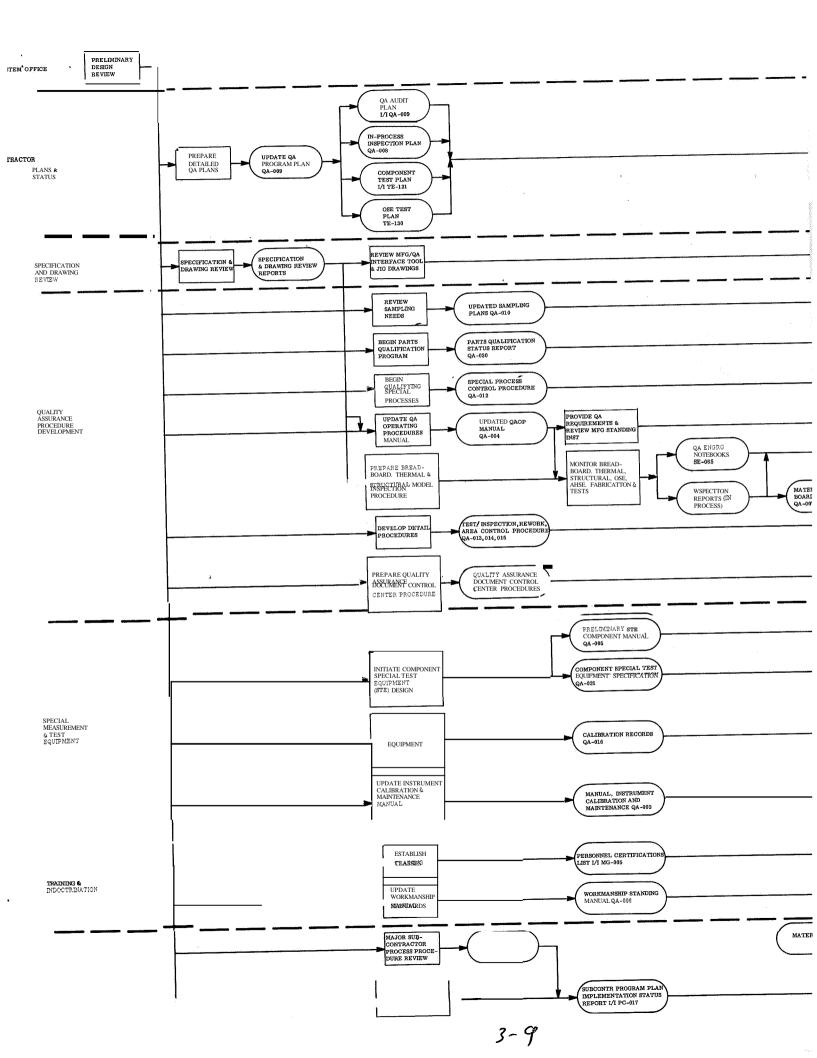
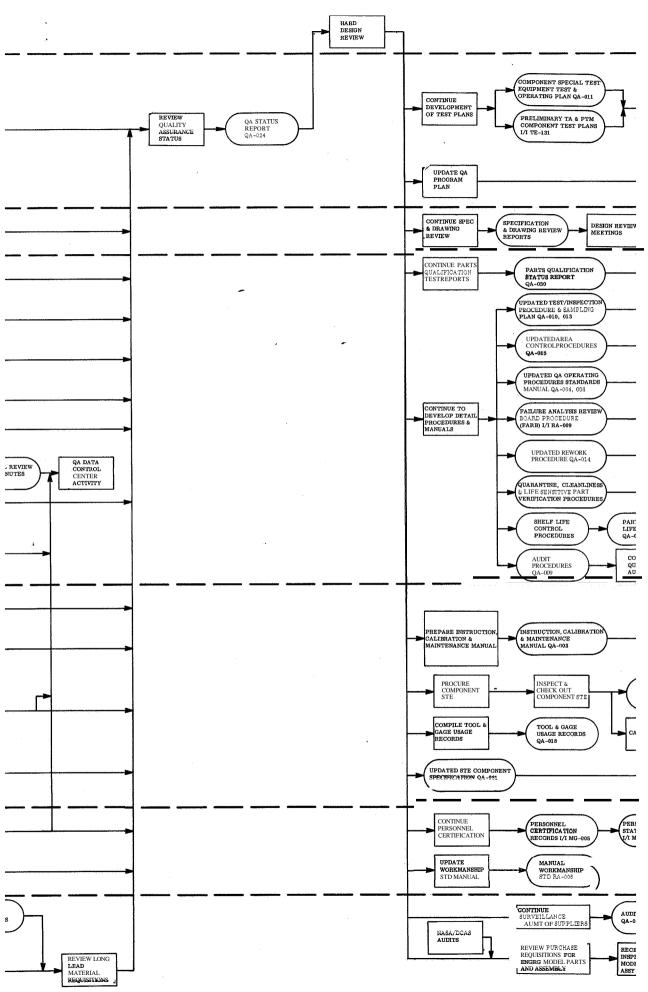
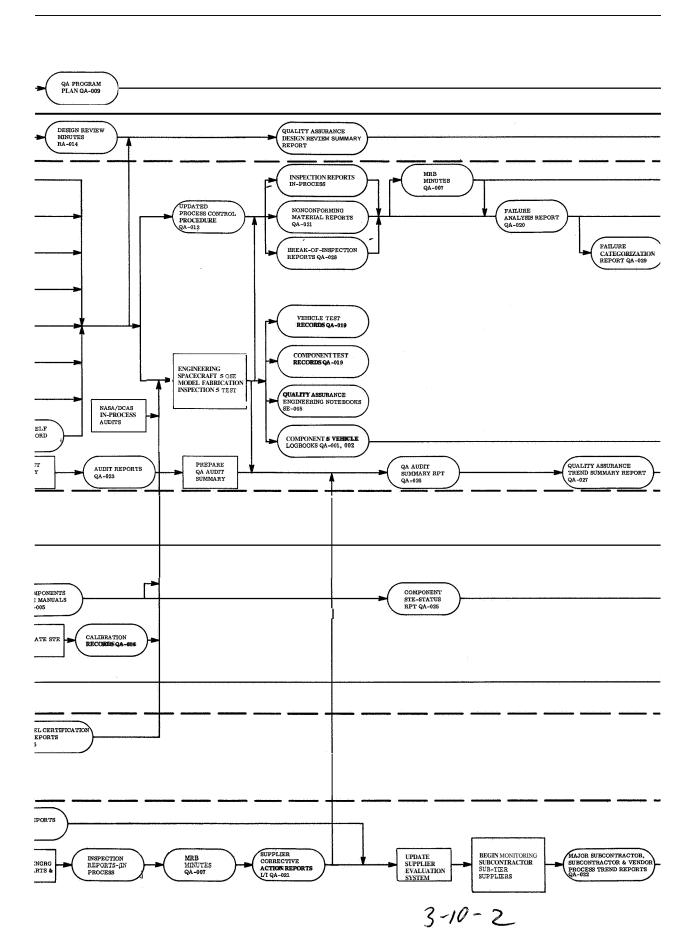


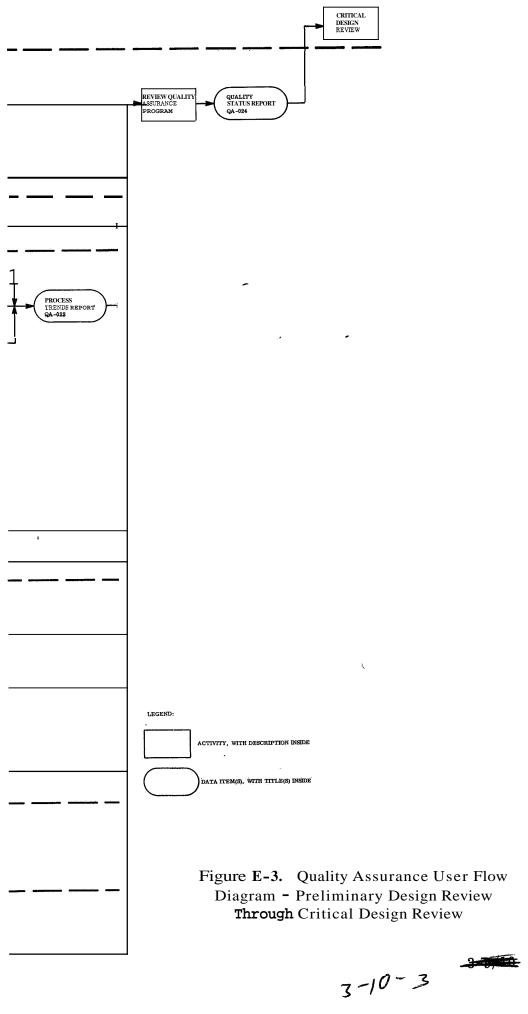


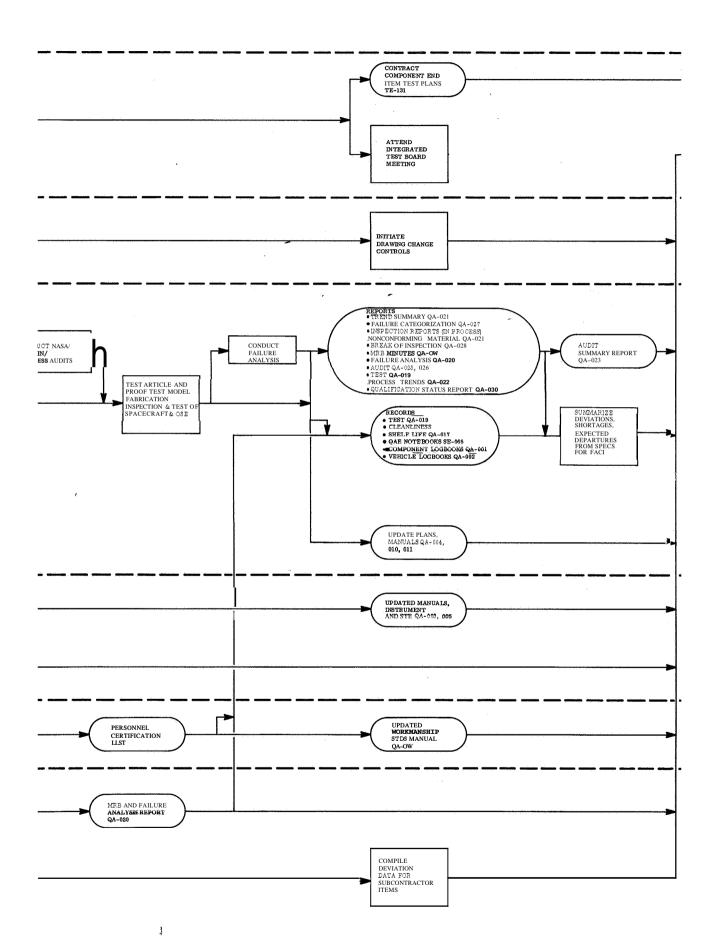
Figure E-2. Quality Assurance User Flow Diagram - Contract Award Through Preliminary Design Review

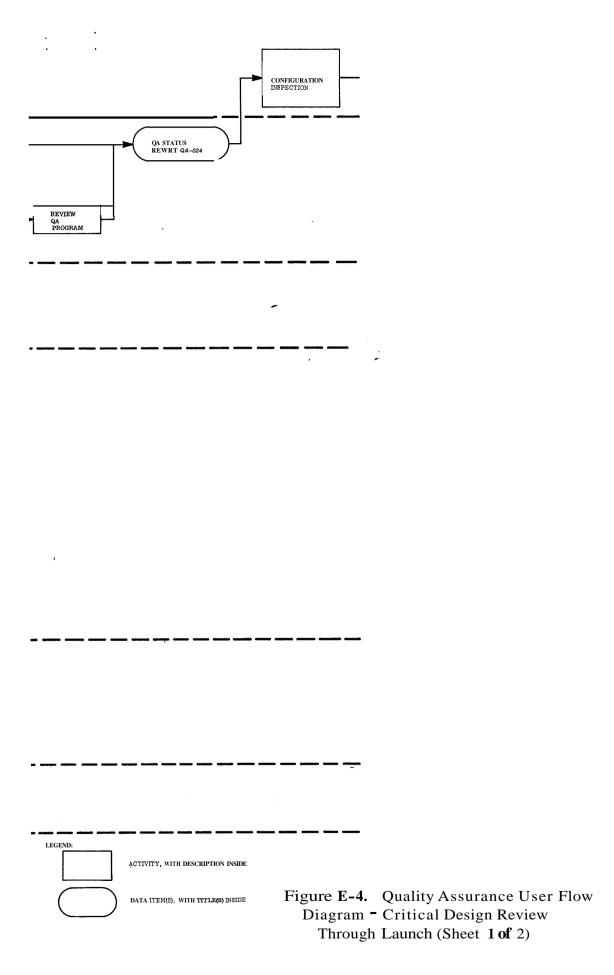


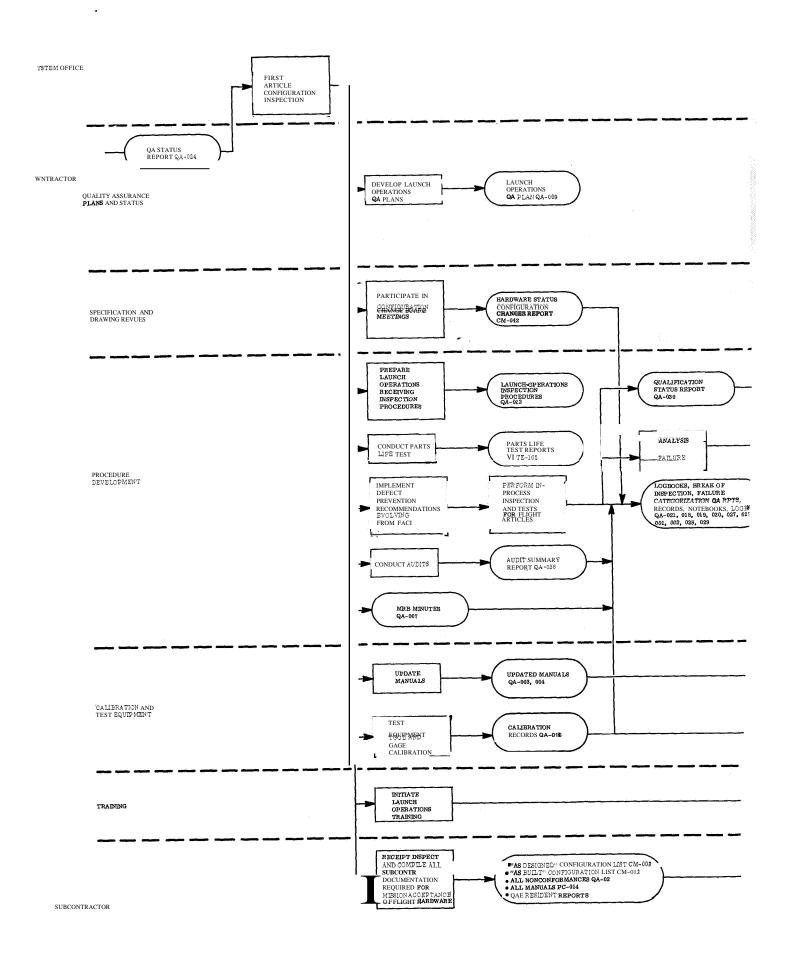


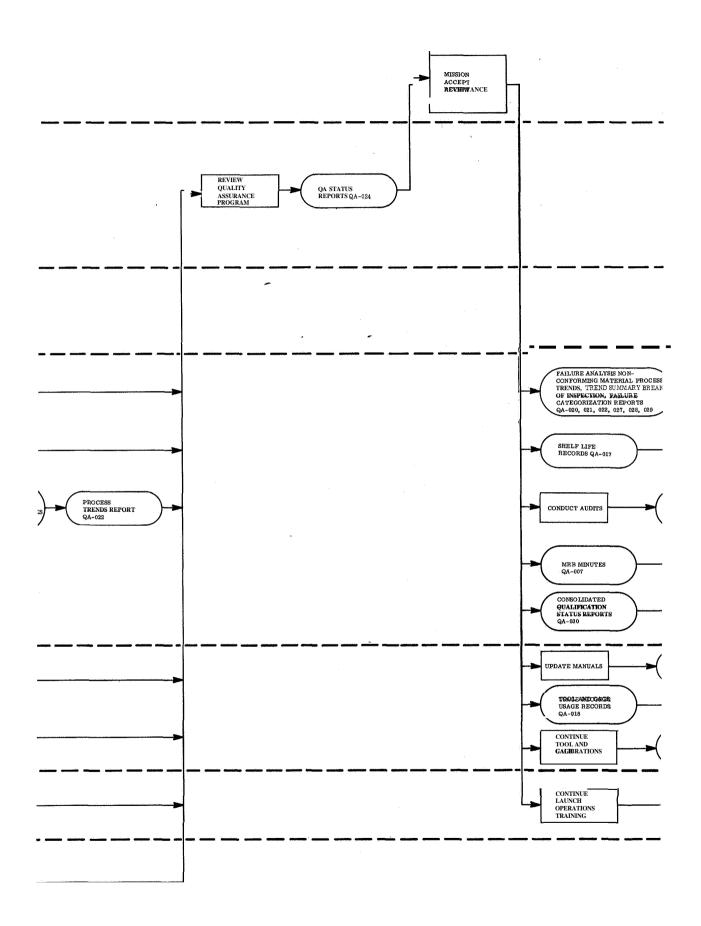


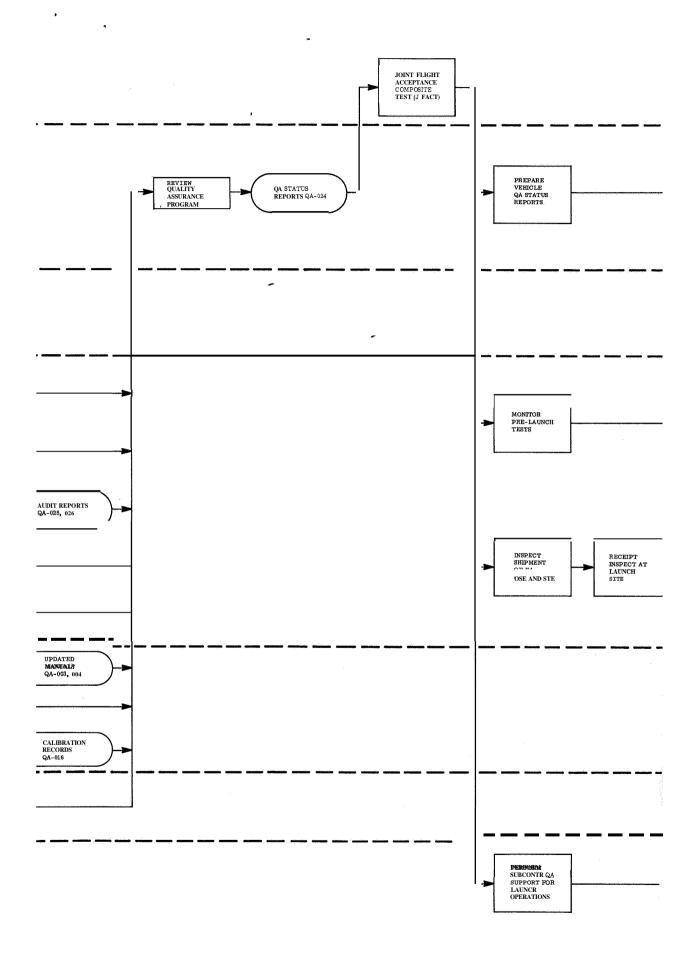




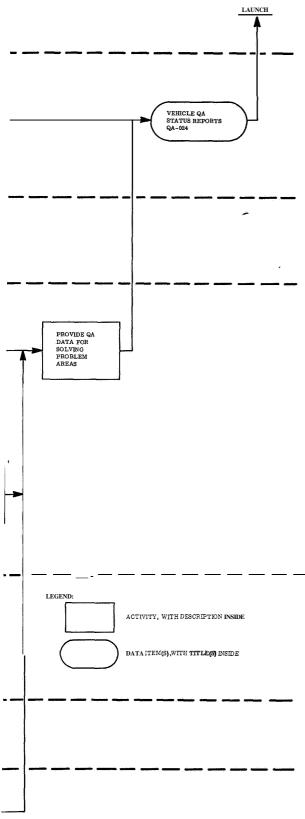








1



1

Figure E-4. QualityAssurance User Flow
Diagram - Critical Design Review
Through Launch (Sheet 2 of 2)

# Quality Assurance Data Requirement Descriptions

DRD Number	<u>Title</u>
QA-001	Logbook, Component
QA-002	Logbook, 'Vehicle
QA-003	Manual, Instrument Calibration and Maintenance
QA-004	Manual, Quality Assurance Operating Procedures
QA-005	Manual, Special Test Equipment, Component
QA-006	Manual, Workmanship Standards
QA-007	Minutes, Material Review Board
QA-008	Plan, Inspection
QA-009	Plan, Quality Assurance Program
QA-010	Plan, Sampling
QA-011	Plan, Test and Operating, for Special Test Equipment (STE), Component
QA-012	Procedure, Process Control
QA-013	Procedure, Test/Inspection
QA-014	Procedure, Rework
QA-015	Procedure, Area Control
QA-016	Record, Calibration
QA-017	Record, Shelf Life
QA-018	Record, Tool and Gauge Usage
QA-019	Record, Test (Materials, Parts, Sub-Assemblies)
QA-020	*Report, Failure Analysis
QA-021	*Report Nonconforming Material (NCMR)
QA-022	*Report, Process Trends
QA-023	*Report, Quality Audit
QA-024	*Report, Quality Status
QA-025	Report, Special Measurement and Test Equipment Evaluation (Component)

<sup>\*</sup>Key Informal Data

3

DRD <u>Number</u>	<u>Title</u>
QA-026	Report, Quality Assurance Audit Summary
&A-027	Report, 'QualityTrend Summary
QA-028	Report, Break of Inspection
QA-029	*Report, Failure Categorization
&A-030	Report, Qualification Status
&A-031	Specification, Special Test Equipment (STE), Component

<sup>\*</sup>Key Informal Data

VOYAGER	DATA REQUIREMENT DESCR	IPTION			DRD APPROVED BY		DATE:	DATA CATEGORY:
VOTAGER	S.III NEGOINEMENT DEGON	ii iiON					,	
	ODE OFFICE RESPONSIBLE QA	FOR <b>DRD</b> :	CODE	DRD PREPA		7/28/67	CONTRACT NO.:	${ m QA-}001$
TITLE OF DOCUMENT.					ONGANIZATION THE FOR DOCUMENT PROPERTY OF PROPERTY OF THE PROP	REPARATION:	TASK OR SUBTASK:	DRL ITEM NO.:
LOGBOOK, COMF	ONENT				ORGANIZATION RE FOR DOCUMENT RE		DRL NO	LEVEL NO.:
		<del></del>		· · · · · · · · · · · · · · · · · · ·	ORGANIZATION RE		DDL NO.	FILE NO.
TYPE OF DOCUMENT: CONTRO	DL DACTION DREFER	ENCE 150 II	NFORM	ATION			NO OF	CODIES
USE OF DOCUMENT: To record chronologi information used in re		_			ORGANIZATION RE FOR DOCUMENT		1	1
and solving anomalies				_	ESTIMATED MA	ANHOURS		ION CUTOFF
meeting requirement					FOR SINGLE PRE		DATE OR I	MILESTONE:
INTERRELATIONSHP WITH OTHER CM-003, Change Noti QA-009, Plan, Qualit			, . <del>.</del>		ESTIMATED CO FOR SINGLE PRE	ST (\$) PARATION		ATA DUE JSER.
QA-009, Plan, Qualit   QA-021, *Report, No	y Assurance Prog onconforming Mate	ram erial (NO	CMR	)	FREOUENCY O	F ISSUE.	PUBLICAT	ION DATE
TE-027, *Logbook, 7	Γest			,	O ANNUALLY O SEMI-ANNUALL	Y	HDR	
TE-061, *Logbook Ci	imulative Test Tir	me			O QUARTERLY O 81-MONTHLY			REQUENCY
CLASS IFICATION:	O GROUP I				O SEMI-MONTHLY	Y	OR MILE  Daily th	STONE)
O SECRET  CONFIDENTIAL	O GROUP 2 □ GROUP 3		ECIAL SA DIS	HANDLING CREET	O €31-WEEKLY			MATED
O SECRET RESTRICTED DATA O CONFIDENTIAL RESTRICTED  MS UNCLASSIFIED	O GROUP 4	O J P O PR	L DISC		O DAILY ON OTHERWISE, AS  1) for each (		EXPIRATI	
ORM OF DATA:	KIND OF DATA.				REFERENCE DOCU	MENTS'		
☑ PRINTED DOCUMENT	O ABSTRACT			UCTION				
O CHART  DIAGRAM	☐ BROCHURE O BULLETIN		LETTE	R				
☐ DRAWING	☐ CATALOG	_	LOG					
☐ FILM (STATIC OR MOTION		О	MANU	AL				
O ILLUSTRATION	O DIRECTIVE	0	MEMO	RANDUM				
O MODEL	O DISCLOSURE		MINUT	ES				
O RECORDING (TAPE OR DE	·		PLAN		APPLICABLE STAN	IDARDS		
O COMPUTER CARD O COMPUTER TAPE	ORDER O REQUEST FOR EN		PROCE					
O MICROFILM (W/OR W/O		_						
O OTHER	O ENGINEERING CH		SCHEE					
	PROPOSAL	0	SPECII	FICATION				
	O HANDBOOK	О	STAND	OARD				
	O INDEX	О	VOUCH	IER				
REVIEWS AND/OR APPROVALS I	REQUIRED:		_		-			
(LIST IN ORDER OF SUBMITTAL)	DRAFT	D/	ATE		PREPUBLICATION	PROOF	D	ATE
SUBMIT FOR REVIEW TO:								
		ВҮ					В Ү	
	_			- <b>-</b>				
SUBMIT FOR APPROVAL TO		BY					BY	
	er, Quality Assura	nce		<b>-</b> -				
*Key Informal Data	<del></del>	PAGE IOF	2				JPI. 2	2568 OCT 6

GE EXHIBIT DRD QA-001	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS:	DRD NO.:
	QA-00
A DRD at the subcontractor/vendor level similar in content to this DRD is required.	
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	

### OUTLINE OF CONTENTS:

- Component Logbook is a chronological, historical record of component activity starting with the first functional test.
- Each Component Logbook is serialized and is assigned to a specific piece of hardware 2. identified by a lot number or serial number.
- The cognizant engineer identifies the various parameters to be recorded in the logbook. **3.** 
  - Number of mate and demating of connectors.
  - Number of hours power was applied to the component. b.
  - Number of operating test cycles of the component.
  - Number of out-of-specification readings (failures) troubleshooting procedure, assignable for the out-of-specification reading and how the correction was accomplished. This is in addition to MRB documentation.
  - Any abnormal occurrence, no matter how insignificant, is recorded.
- References break of inspection record and nonconforming material record. 4.
- References the failures and failure analysis reports. 5.
- Identifies component configuration.

,				DRD APPROVED	BY:	DATE:	CATEGORY:
VOYAGER DAT	A REQUIREMENT DESCRIPTION					,	CALEGORY.
ORGANIZATION ORIGINATING CODE	OFFICE RESPONSIBLE FOR DE	ODE	DRD PREPA	ARED BY:	DATE'	CONTRACT	DRD NO.:
REQUIREMENT. QA	LI OTTICE RESIGNABLE FOR DE	W. CODE	T. Sm		17/28/67 7	NO.:	QA-002
TITLE OF DOCUMENT:	<u> </u>		1. 511	DRGANIZATION	17/20/07	TASK OR	DRL ITEM
THEE OF DOCUMENT.				DOCUMENT	PREPARATION:	SUBTASK:	NO.:
LOGBOOK, VEHIC	LE			Quality As	surance		
				ORGANIZATION FOR DOCUMENT		DRL NO.:	LEVEL NO.:
				ON BOCOMENT	THE THOUSANDIE.		
				ORGANI <b>Z</b> ATION	RESPONSIBLE	DDL NO.:	FILE NO.:
		<del>, , , , , , , , , , , , , , , , , , , </del>	·	FOR DOCUMENT			
TYPE OF DOCUMENT: CONTROL	DACTION DREFERENCE	M INFORM	MATION				
USE OF DOCUMENT:				FOR DOCUME	NT STOWAGE	NO OF	COPIES:
To verify by a document	_	-				10	)
historical and chronolog	•	ts <b>of</b> th	ne	ESTIMATED	MANHOURS	INFORMAT	ON CUTOFF
vehicle presented for bu	y off.			FOR SINGLE P		DATE OR I	MILESTONE:
			,				
INTERRELATIONSHIP WITH OTHER DA	TA REQUIREMENTS:			ESTIMATED FOR SINGLE P		•	ATA DUE JSER:
INTERRELATIONSHIP WITH OTHER DA (CM-005, Index, Contrac	et End Item Approved	l Confi	guration			10 0	OLIV.
CM-010, List, Hardwar CA-001, Logbook, Com		ges		FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE:
(?A-001, Logoook, Collige)				☐ ANNUALLY		HDF	
(?A-021, *Report, Nonc		NCMR	.)	SEMI-ANNU QUARTERLY		11121	
IRA-006, Log, Problem			,	☐ EI-MONTHL\		UPD R MILE	STONE!
CLASSIFICATION:	□ GROUP I			SEMI-MONT DEI-WEEKLY	HLY	As requi	red
SECRET CONFIDENTIAL	☐ GROUP 3 ☐	SPECIAL NASA DI	HANDLING SCREET	☐ WEEKLY			ALEU
☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DA		JPL DIS PROJECT	CREET DISCREET	KI OTHERWISE	AS SPECIFIED		ON DATE:
☑ UNCLASSIFIED		NOFORN		As requ	ired		
FORM OF DATA: KI	ND OF DATA.			REFERENCE DO	CUMENTS:		
☐ PRINTED DOCUMENT	☐ ABSTRACT	☐ INSTE					
CHART	□ BROCHURE	C LETTI	≣R				
☐ DIAGRAM ☐ DRAWING	☐ BULLETIN ☐ CATALOG	LIST LOG					
☐ FILM (STATIC OR MOTION)	☐ CONTRACT	☐ MANU	JAL				
☐ ILLUSTRATION	☐ DIRECTIVE	□ мемо	RANDUM				
□ MODEL	☐ DISCLOSURE	☐ MINU	-				<u> </u>
RECORDING (TAPE OR DISC)		☐ PLAN		APPLICABLE ST	TANDARDS.		
☐ COMPUTER CARD ☐ COMPUTER TAPE	ORDER  REQUEST FOR ENGINEER-	□ PROC	i				
☐ MICROFILM (W/OR W/O CARE	_						
☐ OTHER	ENGINEERING CHANGE	SCHE	DULE				
	PROPOSAL		IFICATION				
	☐ HANDBOOK	STAN					
	□ INDEX	□ vouc	nck .		······································		:
REVIEWS AND/OR APPROVALS REC	UIRED:						
(LIST IN ORDER OF SUBMITTAL)	DRAFT	DATE		PREPUBLICATIO	N PROOF	ח	ATE
		··· <b>-</b>		2010		2.	
SUBMIT FOR REVIEW TO:				the state of the s	· · · · · · · · · · · · · · · · · · ·		
	· · · · · · · · · · · · · · · · · · ·						
	BY					ВҮ	- · ·
			_				
						-	
				······································			<del></del>
SUBMIT FOR APPROVAL TO	BY	· · · · · · · · · · · · · · · · · · ·	<del></del>			ВҮ	<del></del> .
	uality Assurance	• • • • • • • • • • • • • • • • • • • •				<del></del>	<del>,</del>
					<del></del>	•	<del></del>

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
Logbooks may be any number of volumes dependent upon events (number of BOI's etc.) occuring during vehicle processing. Since the books are a completion of numerous types of data items, they will be in notebook form with appropriate covers.	QA-00;
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
1	
OUTLINE OF CONTENTS:	
<ol> <li>Lists all components by serial number, drawing and revision number, and verifies acceptance buy off.</li> <li>Verifies inspection buy off during assembly.</li> <li>List of all nonconforming material reports written during assembly and test and ve acceptance buy off.</li> </ol>	
A Lists all MDD actions and dispositions	

- 4. Lists all **MRB** actions and dispositions.
- 5. Lists all tests and results and verifies acceptance.
- **6.** Records power on time, cycle times, mating and demating **of** connectors, etc. All pertinent actions as performed on the vehicle during assembly and test.
- 7. Records all break of inspection events.
- 8. Record of compliance to the latest configuration.

1				DRD APPROVED BY	<b>/</b> :	DATE:	DATA CATEGORY:
VOYAGER DATA	REQUIREMENT DESCRIPTION						CATEGORY.
ORGANIZATION ORIGINATING CODE:	OFFICE RESPONSIBLE FOR DR	D. CODE.	DRD PREPA	ARED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT: QA			T. Smy		7/28/67	NO.:	QA-003
TITLE OF DOCUMENT'	<del>and the state of </del>			ORGANIZATION RE	<u> </u>	TASK OR	DRL ITEM
THEE OF BOSOMENT				OR DOCUMENT P	REPARATION:	SUBTASK:	NO.:
MANUAL INSTRUMENT	CALIBRATION AND	)		Quality Ass	surance		
MAINTENANCE	0.12.01.11.01.12.12			ORGANIZATION RE		DRL NO.:	LEVEL NO.:
				TON DOCOMENT NO	i nobodilon.		
				ORGANIZATION RI	ESPONSIBLE	DDL NO.:	FILE NO.:
	<del></del>	·		FOR DOCUMENT DI		-,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		□ INFORM					
USE OF DOCUMENT: Provide a s	* *			ORGANIZATION RI		NO. OF	COPIES:
procedures for performing	•			POR DOCUMENT	STOWAGE.	5	
maintenance of test and n				ESTIMATED M	ANHOURS	INFORMAT	ION CUTOFF
controlled procedures ma				FOR SINGLE PRE		-	MILESTONE
eorreliability and confident	ence in the inspection	n and	test				
data.	DECI IIDEMENTS:			ESTIMATED CO			ATA DUE
INTERRELATIONSHIP WITH OTHER DATA	REQUIREMENTS.			FOR SINGLE PRE	PARATION.	10 (	JSER.
.0 A 000 Pl 0 1: A	D			FREQUENCY O	F ISSUE	DUBLICAT	ION DATE:
&A-009, Plan, Quality A	ssurance Program			☐ ANNUALLY	. 10502.	1	DR
				SEMI-ANNUAL QUARTERLY	.LY		
				81-MONTHLY MONTHLY			REQUENCY STONE):
CLASSIFICATION:	☐ GROUP I	<del></del>		□ SEMI-MONTHL	Υ	Maintair	a cur-
SECRET CONFIDENTIAL		SPECIAL NASA DIS	HANDLING SCREET	☐ WEEKLY		rentthr	A launch
☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA		JPL DIS	CREET	DAILY ST OTHERWISE, AS	S SPECIFIED	EXPIRATI	
<b>卧UNCLASSIFIED</b>		NOFORN		Maintain Cu	rrent		
FORM OF DATA: KINE	O OF DATA:			REFERENCE DOCL	JMENTS:		
X PRINTED DOCUMENT	☐ ABSTRACT	☐ INSTR	RUCTION	) TH. C. 4	7.662	111 .1	
☐ CHART	□ BROCHURE	C LETTE	ER .	MIL-C-45			1
☐ DIAGRAM ☐ DRAWING	☐ BULLETIN☐ CATALOG	□ LOG		System R	equireme	ents	
☐ FILM (STATIC OR MOTION)	□ CONTRACT	□ MANL	JAL				
☐ ILLUSTRATION	□ DIRECTIVE	□ мемо	RANDUM				
□ MODEL	☐ DISCLOSURE	□ MINU	TES		<del></del>	· · · · · · · · · · · · · · · · · · ·	·
☐ RECORDING (TAPE OR DISC)	☐ ENGINEERING CHANGE	D PLAN		APPLICABLE STAN	NDARDS:		
COMPUTER CARD COMPUTER TAPE	ORDER  REQUEST FOR ENGINEER-	M PROC					
☐ MICROFILM (W/OR W/O CARD)	ING CHANGE PROPOSAL						
OTHER	ENGINEERING CHANGE	C SCHE	DULE				
	PROPOSAL		IFICATION				
	☐ HANDBOOK ☐ INDEX	☐ STANI					
	· · · · · · · · · · · · · · · · · · ·	<b>- V</b> OOCI					
REVIEWS AND/OR APPROVALS REQUI	RED:						
(LIST IN ORDER OF SUBMITTAL)	DRAFT	DATE		PREPUBLICATION	PROOF	D	ATE
İ							
SUBMIT FOR REVIEW TO:							
	BY					BY	
,							
CURMIT FOR			_		_		
SUBMIT FOR APPROVAL TO	ВУ		_			ВҮ	
Manager.	Quality Assurance						

GE EXHIBIT DRD QA-003
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET
SPECIAL INSTRUCTIONS'
QA-00
Calibration and maintenance procedures for equipment used in tests are published by the equipment engineer. Calibration cycles are based on manufacturer's recommendations and from established historical records on the equipment. A DRD at the subcontractor/vendor level similar in content to this DRD is required.
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING ODL WRITE IN DISTRIBUTION BELOW)
<ol> <li>Type of Equipment, by Manufacturer.</li> <li>A brief description of the equipment.</li> <li>Equipment accuracy limits and ranges.</li> <li>Maintenance procedure as recommended by the manufacturers and supplemented by the equipment engineer.</li> <li>Calibration procedure for the technician utilizing secondary standards traceable to the Bureau of Standards.</li> </ol>
6. Description of the method of documenting the calibration and maintenance performed.
o. Description a the method of documenting the current and maintenance performed.

MANUAL, QUALITY ASSURANCE  OPERATING PROCEDURES  ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRESENCE ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION  ORGANIZATION RESPONSIBLE FOR DOCUMENT REPRODUCTION  ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION.  ORGANIZATION DISTRIBUTION.  ORGANIZATION RESPONSIBLE FOR DOCUMENT DISTRIBUTION.  ORGANIZATION DISTRIBUTION.  ORGANIZATION DISTRIBUTION.  ORGANIZATIO	VOYAGER DATA	REQUIREMENT DESCRIPTION		DRD APPROV	ED BY:	DATE	DATA CATEGORY:
TT. Smyth						00/	CBC VIC.
TITLE OF DOCUMENT  MANUAL, QUALITY ASSURANCE  OPERATING PROCEDURES  MANUAL, QUALITY ASSURANCE  OPERATING PROCEDURES  OPERATING PROCE	DECLIDEMENT	OFFICE RESPONSIBLE FOR DRD:	1 1		1		
MANUAL, QUALITY ASSURANCE OPERATING PROCEDURES  TYPE OF BOGUMENT OCOMITOL DATION SEPTERENCE O IMPORMATION USE OF DOCUMENT TO meet the historical and specific customer requirements with established Voyager Management Quality Assurance Procedures  INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: OR A-021, Report, Nonconforming Material (NCMR)  CLASSIFICATION: OR GROUP 1 OR GROUP 1 OR GROUP 2 OR GROUP 3 OR GROUP 4 OR GROUP 3 OR GROUP 4 OR GROUP 3 OR GROUP 3 OR GROUP 3 OR GROUP 4 OR GROUP 3 OR GROUP 3 OR GROUP 4 OR GROUP 3 OR GROUP 4 OR GROUP 3 OR GROUP 4 OR G	I QA		T. S				
MANUAL, QUALITY ASSURANCE OPERATING PROCEDURES    Quality Assurance   ORGANIZATION RESPONSIBLE   ORGAN	TITLE OF DOCUMENT:						
OPERATING PROCEDURES  OPERATING PROCEDURES  ORGANIZATION RESPONSIBLE FOR DOCUMENT BERPONDITION  ORGANIZATION RESPONSIBLE FOR DOCUMENT BERPONDITION  ORGANIZATION RESPONSIBLE FOR DOCUMENT BERPONDITION  USE OF DOCUMENT.  To meet the historical and specific customer requirements with established Voyager Management  Quality Assurance Procedures  ORGANIZATION RESPONSIBLE FOR DOCUMENT STOWNER  ORGANIZATION RESPONSIBLE FOR DATA OUT TO USER:  ORGANIZATION RESPONSIBLE FOR MISSTORY  ORGANIZATION RESPONSIBLE FOR SUBJECT OF TO USER:  ORGANIZATION RESPONSIBLE FOR DATA OUT TO USER:  ORGANIZATION RESPONSIBLE FOR MISSTORY  ORGANIZATION RESPONSIBLE FOR MISSTORY  ORGANIZATION RESPONSIBLE FOR ENGINEERS OF TO USER:  ORGANIZATION RESPONSIBLE FOR MISSTORY  ORGANIZATION RESPONSI				1		CODIAGN	INO.
TYPE OF DOCUMENT.  TYPE OF DOCUM					<del>, , , ,, ,, , , , , , , , , , , , , , </del>	DDI NO	15/51 15
TITTE OF DOCUMENT OCONTROL DACTION SUBSETERENCE OINFORMATION  USE OF DOCUMENT.  TO meet the historical and specific customer requirements with established Voyager Management Quality Assurance Procedures  ACT OF DOCUMENT STONAGE  ORGANIZATION RESPONSIBLE FOR DOCUMENT STONAGE  ACT OF STIMATED MANAHOURS FOR SINGLE PREPARATION:  DESTINATED MANAHOURS FOR SINGLE PREPARATION:  DESTINATED COST (\$) FOR SINGLE PREPARATION:  DESTINAT	OPERATING PROCEDUR	ES					LEVEL NO
TITTE OF DOCUMENT OCONTROL DACTION SUBSETERENCE OINFORMATION  USE OF DOCUMENT.  TO meet the historical and specific customer requirements with established Voyager Management Quality Assurance Procedures  ACT OF DOCUMENT STONAGE  ORGANIZATION RESPONSIBLE FOR DOCUMENT STONAGE  ACT OF STIMATED MANAHOURS FOR SINGLE PREPARATION:  DESTINATED MANAHOURS FOR SINGLE PREPARATION:  DESTINATED COST (\$) FOR SINGLE PREPARATION:  DESTINAT							
TIPE OF DOCUMENT.  OCONTROL   DACTION   SREFERENCE ON FORMATION   USE OF DOCUMENT.  TO meet the historical and specific customer requirements with established Voyager Management   Quality Assurance Procedures   SITEMATED MANHOURS FOR SINGLE PREPARATION   DIFFERENCIATIONSHIP WITH OTHER DATA REQUIREMENTS:  QA-009, Plan, Quality Assurance Program   QA-021, Report, Nonconforming Material (NCMR)   SECRET   SECRET   SECRET   SECRET RESTRICTED DATA   CONFIDENTIAL   SECRET RESTRICTED DATA   CONFIDENTIAL   SECRET   SECRET RESTRICTED DATA   CONFIDENTIAL   SECRET   SECRET   SECRET RESTRICTED DATA   CONFIDENTIAL   SECRET   SECRE				ORGANI <b>Z</b> ATI	ON RESPONSIBLE	DDL NO.:	FILE NO:
USE OF DOCUMENT:  To meet the historical and specific customer requirements with established Voyager Management Quality Assurance Procedures  DA-O21, Report, Nonconforming Material (NCMR)  CLASSIFICATION:  SECRET RESTRICTED DATA CONFIDENTIAL RESTRICTED DATA COCHART		<del> </del>		FOR DOCUME	ENT DISTRIBUTION.		
To meet the historical and specific customer requirements with established Voyager Management Quality Assurance Procedures    STIMATED MANHOURS FOR SINGLE PREPARATION:   DATE OF SINGLE P	OOMIKOL	DACTION PREFERENCE O	INFORMATION		· · · · · · · · · · · · · · · · · · ·		
To meet the historical and specific customer requirements with established Voyager Management  Quality Assurance Procedures  Interrelationship with other data requirements:  QA-009, Plan, Quality Assurance Program QA-021, Report, Nonconforming Material (NCMR)  CLASSIFICATION  SECRET  O GROUP 1  SECRET  O GROUP 2  SECRET  O GROUP 2  SECRET  O GROUP 2  SECRET  O GROUP 3  SECRET  O GROUP 3  SECRET  O GROUP 4  SECRET BESTINCTED DATA  O GROUP 5  O GROUP 5  O GROUP 5  O GROUP 6  SECRET BESTINCTED DATA  O GROUP 7  O GROUP 7  O GROUP 8  O GROUP 9  O COMPONIANT  O GROUP 9  O							
Quality Assurance Procedures    Cash		-		. 5.1 2000		30	)
Quality Assurance Procedures  INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS:  QA-009, Plan, Quality Assurance Program QA-021, Report, Nonconforming Material (NCMR)  CAASSIFICATION:  SECRET RESTINATED DATA CONFIDENTIAL RESTRICTED DATA CONFIDENTIAL	-		ement	FSTIMAT	ED MANHOURS	INFORMAT	ION CUTOFF
TO USER:	Quality Assurance Proced	lures					
TO USER:							<u> </u>
QA-009, Plan, Quality Assurance Program QA-021, Report, Nonconforming Material (NCMR)    QA-021, Report, Nonconforming Material (NCMR)   CANADALITY		DECLUDENTS	<del></del>			8	
QA-021, Report, Nonconforming Material (NCMR)    QA-021, Report, Nonconforming Material (NCMR)	INTERRELATIONSHIP WITH OTHER DATA	KEQUIKEMENIS:		FUR SINGLE	PKEPAKATION:	то (	JSEK:
QA-021, Report, Nonconforming Material (NCMR)    Cassification:	QA-009, Plan, Quality As	ssurance Program			10// 05 100::5		
CLASSIFICATION:    SECRET   O GROUP	QA-021, Report, Noncon	forming Material (NC	MR)			PUBLICAT	ION DATE:
CLASSIFICATION:    GROUP   CLASSIFICATION:   CLA	- '	-				SDR	2
CLASSIFICATION:    SECRET   SERVICED CONFIDENTIAL   O GROUP 1   O GROUP 2   O GROUP 3   O GROUP 3   O GROUP 4   O GROUP 4   O GROUP 3   O GROUP 4   O GROUP 5   O				O QUARTER D EI-MONT	RLY		
SECRET   CONFIDENTIAL   CONFIDENTIAL   CONFIDENTIAL   CONFIDENTIAL RESTRICTED DATA   CONFIDENTIAL CONFID	CLASSIFICATION:			MONTHL'	Y	Month!	estone) v thru
GONFIDENTIAL SECRET RESTRICTED DATA SOROUP 3 SOR	□ SECRET		PECIAL HANDLI	NG O BI-WEEK	(LY	laur	nch
GONFIDENTIAL RESTRICTED DATA CHORD TO THE CONFIDENTIAL RESTRICTED DATA CHORD TO THE CONFIDENTIAL RESTRICTED DATA CHORD TO THE CONFIDENTIAL RESTRICTED DATA CHORD TO PUBLIC DOMAIN CHORD TO PROJECT DISCREET CHORD TO PROJECT DISCRETT CHORD TO PROJECT DISCR	` □ CONFIDENTIAL	☐ GROUP 3 ☐ N	IASA DISCREET	D DAILY			
FORM OF DATA:    KIND OF DATA.	O CONFIDENTIAL RESTRICTED DATA	A ☐ PROPRIETARY ☐ PI	ROJECT DISCRE	-' 1	-	EARIKAII	ON DAIE
SUBMIT FOR MORE   DATE   SUBMIT FOR REVIEW SAND/OR APPROVAL TO   DATE   SUBMIT FOR REVIEW SAND/OR APPROVAL TO   DATE   SUBMIT FOR REVIEW TO:   SPECIFICATION   DATE   SUBMIT FOR REVIEW TO:   SPECIFICATION   DATE   SUBMIT FOR REVIEW TO:   SPECIFICATION   DATE   SPECIFICATION   SPECIFICATION   DATE			OT OTAL			<u> </u>	
O CHART			•			ns	:
DIAGRAM   BULLETIN   LIST   NPC 200-2   NPC 200-3					-		ו זפד
□ DRAWING □ CATALOG □ LOG □ FILM (STATIC OR MOTION) □ CONTRACT □ O MANUAL □ ILLUSTRATION □ DIRECTIVE □ O MEMORANDUM □ MODEL □ O DISCLOSURE □ O MINUTES □ PLAN □ PL				_	_	cincin (e	· <b></b>
FILM (STATIC OR MOTION)   CONTRACT   O MANUAL   ILLUSTRATION   DIRECTIVE   O MEMORANDUM   O DISCLOSURE   O MINUTES   O MEMORANDUM   O DISCLOSURE   O MINUTES   O COMPUTER CARD   O RECORDING (TAPE OR DISC)   ENGINEERING CHANGE   PLAN   APPLICABLE STANDARDS.    O COMPUTER TAPE   O REQUEST FOR ENGINEER-   REGULATION   ING CHANGE PROPOSAL   O REPORT   O OTHER   O HANDBOOK   O STANDARD   O HANDBOOK   O STANDARD   INDEX   O VOUCHER      REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)   DRAFT   DATE   PREPUBLICATION PROOF   DATE    SUBMIT FOR REVIEW TO:   BY   BY   SY    SUBMIT FOR APPROVAL TO   BY   BY   BY   BY   SY    SUBMIT FOR APPROVAL TO   BY   BY   BY   BY   BY   BY   BY   B				1			
DIRECTIVE O MEMORANDUM DIRECTIVE O MEMORANDUM O DISCLOSURE O RECORDING (TAPE OR DISC) DENGINEERING CHANGE DISC) O RECORDING (TAPE OR DISC) O COMPUTER CARD ORDER COMPUTER TAPE O REQUEST FOR ENGINEER- REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)  SUBMIT FOR REVIEW TO:  BY  O DIRECTIVE O MINUTES O M	_			NFC 200	J-J		
O RECORDING (TAPE OR DISC)		☐ DIRECTIVE C	MEMORANDUM				
O COMPUTER CARD ORDER PROCEDURE  COMPUTER TAPE O REQUEST FOR ENGINEER- REGULATION  MICROFILM (W/OR W/O CARD) ING CHANGE PROPOSAL O REPORT  O OTHER PROPOSAL SPECIFICATION  O HANDBOOK O STANDARD  INDEX O VOUCHER  REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)  DRAFT DATE PREPUBLICATION PROOF DATE  BY  SUBMIT FOR REVIEW TO:  BY  BY  BY  BY  BY							·····
COMPUTER TAPE OREQUEST FOR ENGINEER-REGULATION MICROFILM (W/OR W/O CARD) ING CHANGE PROPOSAL OREPORT SCHEDULE PROPOSAL SPECIFICATION OHANDBOOK OSTANDARD OVOUCHER  REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL) DRAFT DATE PREPUBLICATION PROOF DATE  BY  SUBMIT FOR REVIEW TO:  BY  BY  BY  BY	I '		-	APPLICABLE	STANDARDS.		
MICROFILM (W/OR W/O CARD)   ING CHANGE PROPOSAL O REPORT   SCHEDULE   SPECIFICATION   SPECIFICATION   O HANDBOOK   O STANDARD   O VOUCHER      REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)   DRAFT   DATE   PREPUBLICATION PROOF   DATE      SUBMIT FOR REVIEW TO:	1						
O OTHER							
PROPOSAL O SPECIFICATION O STANDARD O VOUCHER  REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)  DRAFT  DATE  PREPUBLICATION PROOF  DATE  BY  SUBMIT FOR REVIEW TO:  BY  BY  BY  BY  BY  BY  BY	· · · · · · · · · · · · · · · · · · ·						
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)  DRAFT  DATE  PREPUBLICATION PROOF  DATE  SUBMIT FOR REVIEW TO:  BY  SUBMIT FOR APPROVAL TO  BY  BY  BY  BY				N			
REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL)  DRAFT  DATE  PREPUBLICATION PROOF  DATE  SUBMIT FOR REVIEW TO:  BY  SUBMIT FOR APPROVAL TO  BY  BY  BY  BY		O HANDBOOK C	) STANDARD				
CLIST IN ORDER OF SUBMITTAL)  DRAFT  DATE  PREPUBLICATION PROOF  DATE  SUBMIT FOR REVIEW TO:  BY  SUBMIT FOR APPROVAL TO  BY  BY  BY  BY		□ INDEX C	O VOUCHER				
CLIST IN ORDER OF SUBMITTAL)  DRAFT  DATE  PREPUBLICATION PROOF  DATE  SUBMIT FOR REVIEW TO:  BY  SUBMIT FOR APPROVAL TO  BY  BY  BY  BY	DEVIEWS AND/OR APPROVALS PROVI	DED:					
SUBMIT FOR REVIEW TO:  BY  BY  SUBMIT FOR APPROVAL TO  BY  BY  BY		NLD.					
SUBMIT FOR APPROVAL TO		DRAFT [	DATE	PREPUBLICA	TION PROOF	D	ATE
SUBMIT FOR APPROVAL TO  BY  BY  BY  BY  BY	l						
SUBMIT FOR APPROVAL TO	SUBMIT FOR REVIEW TO:						
SUBMIT FOR APPROVAL TO						, — — — — — — — — — — — — — — — — — — —	
APPROVAL TO							
APPROVAL TO							
APPROVAL TO							
APPROVAL TO	QUIDWIT 500						
		BY				ВҮ	
		Quality Assurance					

PAGE TOF 2

JPL 2568 OCT 6

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET					
SPECIAL INSTRUCTIONS:  QA -0					
Procedures incorporate specific customer, and established quality requirements as governed by NASA and Military documents.					
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING ODL WRITE IN DISTRIBUTION BELOW)					
<ol> <li>Defines the purpose and scope of the operating procedure.</li> <li>Assigns specific responsibilities for implementation and control of the procedure.</li> <li>Defines method of implementation by manufacturing.</li> <li>Defines method of measurement and audit requirements.</li> <li>Defines the documentation required to meet the procedure/requirements.</li> </ol>					
Example: Processing of Nonconformance Material Report through the Material Review Board	d.				

			DRO APPROVED E	BY:	DATE:	DATA CATEGORY:
VOYAGER DATA	REQUIREMENT DESCRIPTION					
ORGANIZATION ORIGINATING CODE:	OFFICE RESPONSIBLE FOR DRD	CODE: DRD PREP	ARED BY:	DATE:	CONTRACT	DRD NO
REQUIREMENT: QA		T.F. S	$\mathbf{m}^{\mathrm{yth}}$	7/28/67	NO.:	QA-005
TITLE OF DOCUMENT:			ORGANIZATION R		TASK OR	DRL ITEM
TITLE OF BOOOMENT.			FOR DOCUMENT		SUBTASK:	NO.:
MANUAL, SPECIAL TES	T EOUIPMENT. COM	MPONENT	Quality As	surance		
,	,		ORGANIZATION F		DRL NO.:	LEVEL NO.:
			VOIC BOOMERT			
	•		ORGANIZATION F	RESPONSIBLE	DDL NO.:	FILE NO.
the second secon			FOR DOCUMENT	DISTRIBUTION		
	DACTION MEREFERENCE D	INFORMATION			NO OF	CODIES
USE OF DOCUMENT:	6.1		ORGANIZATION FOR DOCUMEN			_
To control the configurati	-		TOK BOOOMEN	1 OTOWNOL.	10	0
consistent with changes n	•		ESTIMATED I	MANHOURS	INFORMAT	ION CUTOFF
formance requirements a		eration	FOR SINGLE PR		DATE OR I	MILESTONE:
manual for special test e	quipment.		· -			
INTERRELATIONSHIP WITH OTHER DATA	REQUIREMENTS'		ESTIMATED ( FOR SINGLE PR		8	ATA DUE JSER:
MIERRELATIONSMIP WITH CITIEN DATA	NECOMEMENTO.		TOR OMOLL TO	(217110111011	10 (	JOEIN.
CM-003, Change Notice			FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE:
QA-009, Plan, Quality A	ssurance Program		O ANNUALLY		PI	
TE-030, Procedure, Tes	t Operating		SEMI-ANNUA QUARTERLY	LLY		
			O EI-MONTHLY MONTHLY			REQUENCY STONE):
CLASSIFICATION:	O GROUP I		O SEMI-MONTH	ILY	Monthly	thru
O SECRET O CONFIDENTIAL	☐ GROUP 3 O 1	SPECIAL HANDLING NASA DISCREET	O DAILY		FAC ESTIN	I MATED
SECRET RESTRICTED DATA CONFIDENTIAL RESTRICTED DATA		IPL DISCREET PROJECT DISCREET	TO DAILT	AS SPECIFIED	EXPIRATI	ON DATE:
M UNCLASSIFIED		NOFORN	Maintain c	urrent		
FORM OF DATA: KIN	D OF DATA:		REFERENCE DOO	CUMENTS:		
🛛 PRINTED DOCUMENT	☐ ABSTRACT	INSTRUCTION				
CHART		LETTER				
☐ DIAGRAM ☐ DRAWING		□ LIST □ LOG				
O FILM (STATIC OR MDTION)		X MANUAL				
☐ ILLUSTRATION	☐ DIRECTIVE	☐ MEMORANDUM				
O MODEL	□ DISCLDSURE	☐ MINUTES		,		
O RECORDING (TAPE OR DISC)		D PLAN	APPLICABLE ST	ANDARDS		
COMPUTER CARD COMPUTER TAPE	ORDER  REQUEST FOR ENGINEER-	PROCEDURE				
☐ MICROFILM (W/OR W/O CARD)						
□ OTHER		SCHEDULE				
		SPECIFICATION				
		STANDARD				
	□ INDEX	□ VOUCHER				
REVIEWS AND/OR APPROVALS REQU	IRED:					
(LIST IN ORDER DF SUBMITTAL)	DRAFT	DATE	PREPUBLICATION	N PROOF	D	ATE
SUBMIT FOR REVIEW TO:						
	EY				, BY	
		<u> </u>				
SUBMIT FOR APPROVAL TO	ВУ				ВҮ	
	Quality Assurance					

JPL 2568 OCT €

-						
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET						
SPECIAL INSTRUCTIONS:	QA-00					
Quality Assurance Engineer is responsible for maintaining the manual current with the design and performance requirements and changes.	4.2					
,						
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)						
OUTLINE OF CONTENTS:						

- 1. Manual describes the test equipment by drawing number and alteration notice and covers its test capabilities as related to a specific piece of hardware.
- 2. A complete set of print control drawings are a part of the manual.
- **3.** Each modification to test equipment is authorized by a print control drawing and the manual is updated.
- 4. Changes in operating procedures are made at each revision, and manual is maintained current.
- 5. Special precautions for operation are detailed in manual.
- **6.** Equipment troubleshooting procedures are detailed.
- 7. Checkoff lists are detailed for operating equipment.
- 8. Defines the limitation of the equipment.
- 9. Calibration and maintenance cycles.

VOYA	GER DATA F	REQUIREMENT DESCRIPTION			DRD APPROVED BY	· · · · · · · · · · · · · · · · · · ·	DATE:	DATA CATEGORY:
ORGANIZATION ORIGINATING	CODE	OFFICE RESPONSIBLE FOR (	DBD, CODE	DRD PREPA	ARED BY:	DATE.	CONTRACT	DRD NO.:
REOUIREMENT	QA	5.1.62 N.26. 5.16.522 1 <b>5</b> .11		T. Smy		7/28/67	NO.:	QA-006
	QI.	<del></del>		1. SIII)		1		
TITLE OF DOCUMENT:					ORGANIZATION RE		TASK OR SUBTASK:	DRL ITEM NO.:
					Quality Ass			
MANUAL, WORK	MANSH	IP STANDARDS			<del>, , , , , , , , , , , , , , , , , , , </del>	<u> </u>		
					ORGANIZATION RE		DRL NO.:	LEVEL NO.:
					VOIT BOOOMENT THE	I ROBOOTIOI		
					DRGANIZATION RI		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT:	ONTROL	OACTION MORE PRINCE	OWEODA	LATION .	4 OK BOOOMENT B	IOTRIBOTION.		
	ONTROL (	OACTION REFERENCE	OINFORM	MALION	ODGANIZATION D	EODONOIDI E	NO OF	CODIEC
USE OF DOCUMENT:					ORGANIZATION R FOR DOCUMENT		NO OF	COPIES:
To provide visual	aids for	r operators and in	spector	28.25	1		10	
i ~		-	-	s as		ANII 101 ID 0	INICODMAT	ION CUTOFF
acceptance criteri	a for ap	pplicable processes	S.		ESTIMATED M FOR SINGLE PRE			MILESTONE:
					COTIMATED OF	20T / 6\	DATE D	ATA DUE
INTERRELATIONSHIP WITH O	THER DATA	REQUIREMENTS:			ESTIMATED CO FOR SINGLE PRE		•	JSER:
						-		
O 4 000 Pl O	1°. A	ъ			FREQUENCY O	OF TOOLIE		
QA-009, Plan, Qu	iality A	ssurance Program	1			DF 1880E:	PUBLICAT	ION DATE:
					☐ ANNUALLY ☐ SEMI-ANNUAL	ΙΥ		
					☐ QUARTERLY	<u>-</u> 1	LIDDATE /	REOUENCY
					☐ 81-MONTHLY  MONTHLY			
CLASSIFICATION:		O GROUP I	•		☐ SEMI-MONTHL	Υ.	Monthly	
☐ SECRET ☐ CONFIDENTIAL		O GROUP 2  GROUP 3	☐ SPECIAL O NASA DI	HANDLING	O WEEKLY		FA	MATED
SECRET RESTRICTED D.		O GROUP 4	O JPL DIS	CREET	O DAILY ST OTHERWISE, A	\$ SPECIFIED		ON DATE:
O CONFIDENTIAL RESTR  MUNCLASSIFIED	CTED DATA	O PROPRIETARY O PUBLIC DOMAIN	O PROJECT O NOFORN	Γ DISCREET	Maintain cu			
23 ONOLAGOII ILD		7	0		<del> </del>		<u> </u>	· · · · · · · · · · · · · · · · · · ·
FORM OF DATA:	KIND	OF DATA.			REFERENCE DOCU	JMENTS:		
EX PRINTED DOCUME	NT	□ ABSTRACT	☐ INST	RUCTION	NDC 200	4		
O CHART		O BROCHURE	O LETT	ER	NPC - 200-	-4		
O DIAGRAM		O BULLETIN	☐ LIST					
☐ DRAWING		O CATALOG	LOG					
O FILM (STATIC OR N	IOTION)	O CONTRACT	<b>ঐ</b> MAN					
O ILLUSTRATION		O DIRECTIVE		ORANDUM				
□ MODEL		O DISCLOSURE	O MINU		ADDITION DE CTA	NDADDO	<u> </u>	
☐ RECORDING (TAPE	OR DISC)	O ENGINEERING CHANGE	☐ PLAN		APPLICABLE STA	NDARDS.		
O COMPUTER CARD		ORDER	O PRO					
O COMPUTER TAPE		☐ REOUEST FOR ENGINEE						
☐ MICROFILM (₩/OR	W/O CARD)	ING CHANGE PROPOSA	_					
O OTHER		O ENGINEERING CHANGE						i
		PROPOSAL		IFICATION				
	<del></del>	O HANDBOOK	O STAN					
<u> </u>		O INDEX	O VOUC	HEK				
REVIEWS AND/OR APPROV	ALS RECLU	RFD:	· · · · ·	<u> </u>	######################################			
(LIST IN DROER OF SUBMI								
	0	DRAFT	DATE		PREPUBLICATION	PROOF	D	ATE
SUBMIT FOR REVIEW TO'				<del></del>				<del></del>
							***************************************	
1		ВҮ					ВҮ	•
_		•		_			<del></del>	· · · · · · · · · · · · · · · · · · ·
<u> </u>	· · · ·			<del>-</del>	<del>a ing katang pantang katan</del>	<del></del>		· · · · · · · · · · · · · · · ·
ľ			<del></del>	<del></del>			****	<del></del> :
SUBMIT FOR APPROVAL TO		ВҮ					a Y	
1	anagar	Mahufacturing					***************************************	<del>,</del>
<u>IV</u>	ianager,	manuracturing						<del></del>

PAGE IOF 2

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS	DRD NO.: QA-00
Samples of workmanship are closely coordinated and compatible with the operator/inspector training school for certification. Photographs or work samples must be jointly selected with the customer. A DRD at the subcontractor/vendor level similar in content to this DRD is required.	ly
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN_DISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:	
<ol> <li>The manual defines the categories of acceptance and rejection with samples of work photographs defining, accept, minimum acceptable, and reject.</li> <li>Defines the limitations on rework (e.g. number of splices).</li> <li>Recommends approved inspection procedure (e.g. magnification power).</li> <li>Establishes the most significant criteria of inspection.</li> </ol>	COT

JPL 2568-1 OCT 65

VOYAGER DATA	A REQUIREMENT DESCRIPTION		D	ORD APPROVED	ВУ	DATE:	DATA CATEGORY:
					· · · · · · · · · · · · · · · · · · ·		
ORGANIZATION ORIGINATING CODE. QA	OFFICE RESPONSIBLE FOR [	1 1	PREPARE Smy		DATE 7/28/67	CONTRACT NO.:	DRD NO.: $\mathrm{QA}$ – $007$
TITLE OF DOCUMENT:						TASK OR	DRL ITEM
				OR DOC MEN		SUBTASK:	NO.;
MINUTES, MATERIAL F	REVIEW BOARD		<u> </u>	Quality As			<u> </u>
·				ORGANIZATION OR DOCUMENT	RESPONSIBLE REPRODUCTION:	DRL NO.:	LEVEL NO.
	,			PRGANIZ ATION		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: CONTROL	CALCALON COSCOLATION	T NEOD ATON		OR DOCUMENT	DISTRIBUTION:		
USE OF DOCUMENT. CONTROL	DACTION DREFERENCE	X INFORMATION		20041117471011	DEODONOIDI E	NO OF	000150
USE OF DOCUMENT.				ORGANIZATION FOR DOCUME			COPIES:
To manage the status of h	andruana vyhiah ia ma	m a a m famma i m a	_			10	)
To report the status of h	ardware which is no	oucomor.ming	_	ESTIMATED	MANHOURS	INFORMAT	ION CUTDFF
			F	OR SINGLE P	REPARATION'	DATE OR MILESTONE	
INTERRELATIONSHIP WITH OTHER DAT	A REQUIREMENTS:			ESTIMATED OR SINGLE P		DATE DATA DUE TO USER:	
CM-016, List, Deviation						10	OOLIK.
QA-009, Plan, Quality A				FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE:
QA-021, Report, Noncor	•	,		O ANNUALLY			
RA-007, *Minutes, Failu	ıre Analysis Review	Board (FAR	RB)	O SEMI-ANNU. O QUARTERLY	ALLY	SDR	
SE-057, Drawings (Cates	gory B) for Interface	e Control	1 (	O EI-MONTHLY O MONTHLY	•		FREQUENCY
CLASSIFICATION:	O GROUP I			SEMI-MONTH	HLY	Weekly	thru
O SECRET  CONFIDENTIAL		O SPECIAL HANDLI  NASA DISCREET	1 4	81-WEEKLY WEEKLY		laune	MATED
O SECRET RESTRICTED DATA O CONFIDENTIAL RESTRICTED DAT	O GROUP 4	O JPL DISCREET O PROJECT DISCRE		□ DAILY O OTHERWISE,	AS SPECIFIED	-	ON DATE
☑ UNCLASSIFIED		O NOFORN					
FORM OF DATA: KIN	IO OF DATA:			EFERENCE DO			
A PRINTED DOCUMENT	O ABSTRACT	☐ INSTRUCTION	ıll	NASA Spe	cifications		
O CHART	O BROCHURE	O LETTER					
O DIAGRAM	O BULLETIN	O LIST					
O DRAWING O FILM (STATIC OR MOTION)	O CATALOG O CONTRACT	O LOG O MANUAL					
O ILLUSTRATION	O DIRECTIVE	☐ MEMORANDUM	и				
O MODEL	O DISCLOSURE	☐ MINUTES					
O RECORDING (TAPE OR DISC)	O ENGINEERING CHANGE	☐ PLAN	А	APPLICABLE STANDARDS:			
O COMPUTER CARD	ORDER	O PROCEDURE	1				
O COMPUTER TAPE	O REOUEST FOR ENGINEER						
O MICROFILM (W/OR W/O CARD) O OTHER	) ING CHANGE PROPOSA O ENGINEERING CHANGE						
O OTTLER	PROPOSAL PROPOSAL	□ SPECIFICATIO	ON				
	O HANDBOOK	O STANDARD					
	O INDEX	□ VOUCHER					
DEVIEWS AND/OR ADDROVALS DEGL	IIDED.						
REVIEWS AND/OR APPROVALS REQUIRED (LIST IN ORDER OF SUBMITTAL)	JIKED:						
	DRAFT	DATE	PR	EPUBLICATION	N PROOF	D	ATE
ļ							
SUBMIT FOR REVIEW TO: -	<del>-</del>						
	BY _					,в ү	
SUBMIT FOR							
APPROVAL TO	BY					BY	
<u>Manage</u>	r <b>,</b> Quality Assuranc	e <u> </u>					

VOYAGED DATA DECLUDEMENT DESCRIPTION - 2ND SHEET	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS:	DRD NO.:
A DRD at the subcontractor/vendor level similar in content to this DRD is required.	QA-007
Contents (see below) shall be coded for inclusion in data system facilitating computorizing data.	
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:	
1. Description of hardware by drawing number and nomenclature.	
<ol> <li>Identification of hardware by serial number and lot number.</li> <li>Description of nonconformance and the assignable cause.</li> </ol>	
4. Corrective action assigned to specific individuals or functions.	
5. Disposition of the hardware:	
a. Accept as is b. Return to vendor	

- c. Repair
- d. Retest
- e. Scrap
- f. For Engineering use only "E" stamp
- g. Submit to failure analysis
- **6.** Approvals
  - a. Quality Assurance Engineering
  - b. Design engineering
  - c. Customer representative

			DRD APPROVED	) BY:	DATE:	DATA CATEGORY:
VOYAGER DATA	REQUIREMENT DESCRIPTION			ļ	,	CATEGORY
ORGANIZATION ORIGINATING CODE:	OFFICE RESPONSIBLE FOR DR	D' CODE DRD PE	REPARED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT: QA			Smyth	7/28/67	NO.	QA-008
TITLE OF DOCUMENT:	<u> Lander de la companya de la compan</u>			RESPONSIBLE	TASK OR	DRL ITEM
,			i i	T PREPARATION	SUBTASK:	NO.;
PLAN	INSPECTION		<u> </u>	Assurance	221.10	VENEL NO.
1 11, 11,	HOI LOTTOTT			N RESPONSIBLE T REPRODUCTIO <b>N</b> :	DRL NO.:	LEVEL NO.:
J				N RESPONSIBLE IT DISTRIBUTION:	DDL NO.;	FILE NO.
TYPE OF DOCUMENT: MICONTROL	DACTION DREFERENCE [	☐ INFORMATION	1 511 2 3 3 5 1	Diottale		
USE OF DOCUMENT.				N RESPONSIBLE	NO OF	COPIES
To document the parame		-	FOR DOCUM	IENT STOWAGE:		
manufacture cycle to ass	•	l-of quality	ESTIMATED	MANIHOLIBS	INFORMAT	ION CUTOFF
consistent with drawing	requirements.			MANHOURS PREPARATION:		MILESTONE:
INTERRELATIONSHIP WITH OTHER DATA	REQUIREMENTS:	,	ESTIMATED FOR SINGLE	COST(\$) PREPARATION:		ATA DUE JSER'
MG-004, Manufacturing MG-012, *Request, Man	Standing Instruction	s (MSIs)	10	T NEI / GOTTES		JOLIN
QA-009, Plan, Quality A	Surance Program		FREQUENC	Y OF ISSUE:	PUBLICAT	ION DATE:
SE-059 Drawings (Cate	egory E) for Manufa	cture and	O ANNUALLY		SDR	
Procurement o	of Prime Equipment		O SEMI-ANNI O QUARTERLY	Υ		FREQUENCY
			O BI-MONTHLY		OR MILE	ESTONE).
CLASSIFICATION: O SECRET	O GROUP I O GROUP 2 O	SPECIAL HANDLIN	O SEMI-MON O 81-WEEKLY		rhrough	ı HDR
O CONFIDENTIAL  SECRET RESTRICTED DATA	O GROUP 3	NASA DISCREET	O DAILY	- 14 aprojejen	ESTIN EXPIRATI	MATED ON DATE
O CONFIDENTIAL RESTRICTED DATA  ☐ UNCLASSIFIED	O PROPRIETARY	PROJECT DISCREE	One tim	E,AS SPECIFIED .	EAFINALI	ON DAIL
		110. 3	REFERENCE DO		L	
FORM OF DATA: , KINI  PRINTED DOCUMENT	O OF DATA.  O ABSTRACT	O INSTRUCTION				
O CHART	□ BROCHURE	O LETTER	Applicable	le NASA Sp	ec.	
O DIAGRAM	O BULLETIN	O LIST				
O DRAWING O FILM (STATIC OR MOTION)	O CATALOG O CONTRACT	O LOG O MANUAL				
O ILLUSTRATION		☐ MEMORANDUM	3			
O MODEL	O DISCLOSURE	O MINUTES			<u> </u>	
O RECORDING (TAPE OR DISC)		D PLAN	APPLICABLE S	STANDARDS:		<del></del> .
O COMPUTER CARD O COMPUTER TAPE	ORDER O REQUEST FOR ENGINEER-	O PROCEDURE				
☐ MICROFILM (W/OR W/O CARD)	ING CHANGE PROPOSAL					
O OTHER		☐ SCHEDULE				
		□ SPECIFICATION	N			
	O HANDBOOK O INDEX .	O STANDARD  VOUCHER				
	<del></del>					<del> </del>
REVIEWS AND/OR APPROVALS REQUI	RED:					
	DRAFT	DATE	PREPUBLICATION	ON PROOF	0	ATE
SUBMIT FOR REVIEW TO:						
					,BY	
					·-·	
<u> </u>						
SUBMIT FOR					ВҮ	
APPROVAL TO  Manager	Quality Assurance		-			
<u> </u>	, againy 7133 dranee		-		-	

GE EXHIBIT DRD QA-008	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS:	DRD NO.: QA-008
For critical processes special inspection planning is issued. A DRD at the subcontractor/vendor level similar in content to this DRD is required.	
SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING, DDL WRITE IN DISTRIBUTION BELOW)	\$
None	

#### OUTLINE OF CONTENTS:

Inspection Planning contains control parameters that specify attributes to be inspected and lists any special inspection tooling required to verify conformance to the Quality Assurance Plan during the manufacturing cycle.

- 1. Hardware drawing number
- Hardware nomenclature 2.
- 3. Project
- 4. NHA number
- Applicable specifications (manufacturing standing instructions, military standard, etc.)
- **6.** Operation number

VOYAGER DA	TA REOUIREMENT DESCRIPTION	, , <del></del>		DRD APPROVED BY		DATE:	DATA CATEGORY:
				<u> </u>		CONTRACT	DRD NO.:
ORGANIZATION ORIGINATING COERCE REQUIREMENT Q.A.	E: OFFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	1	DATE: 28/67	CONTRACT NO.:	₽ <b>A</b> =00[
TITLE OF DOCUMENT:				UNGANIZATION RESPU		TASK OR	DRL ITEM
				FOR DOCUMENT PREP		SUBTASK:	NO.:
PLAN, QUALITY ASS	IRANCE PROGRAM	ſ		Quality Assura			· .
TEM, QUIETT 1155		_		ORGANIZATION RESPO		DIRL NO.:	LEVEL NO.:
				ORGANIZATION RESPO		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: MICONTROL	DACTION DREFERENCE	□ INFORM	ATION	FOR DOCUMENT DISTR	IIBO I IOIN.		
USE OF DOCUMENT:			· · · · · · · · · · · · · · · · · · ·	ORGANIZATION RESP	ONSIBLE	NO OF	COPIES
The Quality Assurance				FOR DOCUMENT STO	WAGE.	1	0
corporates all contrac ment of specific qualit							
levels of hardware fab				ESTIMATED MANH FOR SINGLE PREPAR			ION CUTOFF MILESTONE:
the customer.	, , , , , , , , , , , , , , , , , , , ,	Ţ.	<b>ر</b>				
		<del></del>		ESTIMATED COST (			ATA DUE
INTERRELATIONSHIP WITH OTHER DA				FOR SINGLE PREPAR	RATION.	TO U	JSER
MG-009, Plan, Manuf RA-015, Report, Fail						·	
SC-002, Schedule, Pro				FREQUENCY OF I	SSUE.		ION DATE:
SC-004, Schedule, Ta		el (PERT	7)	O ANNUALLY O SEMI-ANNUALLY		SDI	R
SE-006, Plan, Cleanli	ness Control			O OUARTERLY  BI-MONTHLY			REQUENCY
CLASSIFICATION:	O GROUP I			O MONTHLY O SEMI-MONTHLY		or MILE rhrough	STONE).
□ SECRET	O GROUP 2	O SPECIAL		O 81-WEEKLY  WEEKLY			
O SECRET RESTRICTED DATA	O GROUP 3 O GROUP 4	O JPL DIS	CREET	O DAILY DX OTHERWISE, AS SE	PECIFIED	ESTIM EXPIRATI	MATED ON DATE'
O CONFIDENTIAL RESTRICTED DA MINICIPAL DE LA CONFIDENTIAL RESTRICTED DE LA CONFIDENTIAL RESTRICTED DA MINICIPAL DE LA CONFIDENTIAL RESTRICTED DE LA CONFIDENTIAL RESTRICTE DE LA CONFIDENTIAL RESTRICT	ATA O PROPRIETARY  D PUBLIC DOMAIN	O PROJECT O NOFORN	DISCREET	One time	2011 122		
FORM OF DATA:	IND OF DATA'			REFERENCE DOCUME	NTS:		
☑ PRINTED DOCUMENT	O ABSTRACT	□ INSTR	UCTION				
O CHART	O BROCHURE	O LETTE	:R	NPC - 200-	2, 200	)–3 and 2	00-4
O DIAGRAM	O BULLETIN	O LIST					
DRAWING	O CATALOG	O LOG	141				
☐ FÌLM (STATIC OR MOTION) O ILLUSTRATION	O CONTRACT O DIRECTIVE	☐ MANU					
□ MODEL	O DISCLOSURE	O MINU					
O RECORDING (TAPE OR DISC		X PLAN		APPLICABLE STANDARDS:			
O COMPUTER CARD	ORDER	O PROC	EDURE				
COMPUTER TAPE	O REQUEST FOR ENGINEE						
☐ MICROFILM (W/OR W/O CAR O OTHER	<ul> <li>ING CHANGE PROPOS</li> <li>O ENGINEERING CHANGE</li> </ul>						
OTHER	PROPOSAL		FICATION				
	O HANDBOOK	O STANI	DARD				
	□ INDEX	O VOUCH	HER				
REVIEWS AND/OR APPROVALS REC	DUIRED:			L			
(LIST IN ORDER OF SUBMITTAL)		D.4.T.E.		DDEDLID: 10.47:0:: ==	.005	_	
	DRAFT	DATE		PREPUBLICATION PR	JUUF	D	ATE
SUBMIT FOR REVIEW TO:							
JODIVILI FOR REVIEW IU:							
	ВҮ					ВҮ	
SUBMIT FOR	BY					вү ——	
APPROVAL TO Projec	t Manager						
110,66	· manager						

PAGE I OF 2

OE EXHIBIT DIO QA-007	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS'	DRD <b>NO</b> .:
None	QA-00!
Tone	
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	

#### OUTLINE OF CONTENTS:

Delineates the implementation of the controls proposed by the system contractor necessary to meet the requirements of NPC 200-2 and the customer work statement. Contents are a sfollows

- 1. Introduction
- 2. Approach/Problems
  - a. Traceability
  - b. Customer/Contractor Relationship
  - c. Life-Sensitive Flight Hardware
  - d. Cleanliness
- 3. Management
  - a. GE
  - b. Major Subcontractors
  - c. Program Management
- 4. Program Controls
  - a. Design and development control
  - b. Control of procured material
  - c. Control of contractor's fabricated articles
  - d. Test controls
  - e. **Data** reporting and corrective action
  - f. QA audits
  - g. Inspection, measuring and test equipment
- 5. Relationship with other management plans

VOYAGER D	DRD APPROVED E	BY .	DATE:	DATA CATEGORY:			
							DRD NO.:
RECHIREMENT	DE: OFFICE RESPONSIBLE FOR	DRD: CODE [	ORD PREPA		DATE	CONTRACT NO.:	
Q,ı	4	LL	1.	Smyth	7/28/67		QA-010
TITLE OF DOCUMENT:				ORGANIZATION FOR DOCUMENT	PREPARATION:	TASK OR SUBTASK:	DRL ITEM NO.;
				Quality Ass			,
PLAN, S	SAMPLING			ORGANIZATION F		DRL NO.:	LEVEL NO.:
·				FOR DOCUMENT F			
				ORGANIZATION I		DDL NO;	FILE NO.
TYPE OF DOCUMENT: MICONTROL	_ DACTION DREFERENCE	☐ INFORMAT	IOŇ	POR DOCUMENT			
USE OF DOCUMENT:	I the established -		_	ORGANIZATION		NO OF	COPIES:
To document and cont		<del></del>		FOR DOCUMEN	I STOWAGE:	5	5
necessary to maintair		•				INFORMAT	ION CUTOEF
coming bulk material	· · · · · · · · · · · · · · · · · · ·			ESTIMATED I FOR SINGLE PR			ION CUTOFF MILESTONE:
fuses, etc. The plan a	A A	mpatible	with				
the quality requireme	,			ESTIMATED (		a de la companya de	ATA'DUE
INTERRELATIONSHIP WITH OTHER (				FOR SINGLE PR	EPARATION.	TO U	JSER:
QA-009, Plan, Qualit	y Assurance Progra	m		FREQUENCIE	OF 100115	<u> </u>	
QA-019, Record, Tes	st (Materials, Parts,	Subasser	nblies)		OF ISSUE:	PUBLICAT	ION DATE.
				O ANNUALLY O SEMI-ANNUA	LLY	SD	R
				O QUARTERLY O 81-MONTHLY		UPDATE (F	REOUENCY
CLACOLFICATION:	O ODOUD I	· · ·		☐ MONTHLY ☐ SEMI-MONTH	LY		STONE):
CLASSIFICATION:	O GROUP 1 O GROUP 2	O SPECIAL H		O 81-WEEKLY  WEEKLY		Through	
CONFIDENTIAL O SECRET RESTRICTED DATA	O GROUP 3 O GROUP 4	O NASA DISC O JPL DISCR		O DAILY	AC ODECIEIED	ESTIN EXPIRATI	MATED ON DATE'
O CONFIDENTIAL RESTRICTED I	OATA O PROPRIETARY O PUBLIC DOMAIN	O PROJECT D O NOFORN	ISCREET	One time			011 27112
				REFERENCE DOC		<u>L</u>	
	KIND OF DATA:	□ INCTDU	CTION	MIL- ST			
E PRINTED DOCUMENT  ☐ CHART	O ABSTRACT O BROCHURE	O LETTER	JIION	NPC 200			
□ DIAGRAM	O BULLETIN	O LIST		NPC 200	) <b>-</b>		
D DRAWING	O CATALOG	OLOG					
O FILM (STATIC OR MOTION)	O CONTRACT	O MANUA	L				
O ILLUSTRATION	O DIRECTIVE	☐ MEMORA	ANDUM				
MODEL	O DISCLOSURE	O MINUTE:	S	ADDUCADLE CT	VVIDADDO:		
RECORDING (TAPE OR DIS	•		IIDE	APPLICABLE STA	ANDAKDS.		
O COMPUTER CARD O COMPUTER TAPE	ORDER O REQUEST FOR ENGINE	O PROCED ER- 🗆 REGULA					
O MICROFILM (W/OR W/O CA			•				
☐ OTHER	O ENGINEERING CHANGE	SCHEDU	LE				
	PROPOSAL	O SPECIFI					
	O HANDBOOK	O STANDA					
<del>,</del>	O INDEX	O VOUCHE	ĸ				
REVIEWS AND/OR APPROVALS RE	EQUIRED:			<del></del>	*************	<del></del>	
(LIST IN ORDER OF SUBMITTAL)	DRAFT	DATE		PREPUBLICATION	PPOOF	ח	ATE
	DIMIT	DATE		T RET OBLICATION	i NOOP	U	L
CLIDMIT EOD DEVIEW TO							
SUBMIT FOR REVIEW TO:						***************************************	
	ВҮ	····				ВҮ	<del></del>
			_				
			_				
			_				
SUBMIT FOR			<del>-</del>			ВҮ ——	
APPROVAL TO'  Manage		20	_				
Manag	ger, Quality Assurance	<u> </u>	_				

PAGE I OF 2

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

#### SPECIAL INSTRUCTIONS'

DRD NO.: QA-010

Incoming inspection planning with the Quality Assurance Engineer determines the acceptable quality levels for incoming inspection of bulk material or special articles and specifies the sampling plan for the lot size. A DRD at the subcontractor/vendor level similar in content to this **DRD** is required.

SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING, DDL WRITE IN DISTRIBUTION BELOW)

#### OUTLINE OF CONTENTS:

- 1. Hardware drawing number
- 2. Hardware nomenclature
- 3. Applicable specifications
- 4. Lot size
- 5. Sample size
- 6. Acceptance criteria
- 7. Operating characteristic curve
- 8. Space **for** recording data
- 9. Signature of originator
- 10. Revision number of planning
- 11. Date

VOVACED DATA DECUMPEMENT DECORPORTOR				DRD APPROVED B	Υ	DATE:	DATA CATEGORY:	
· VO	YAGER DATA I	REQUIREMENT DESCRIPTION						ONIEGUKY.
ORGANIZATION ORIGINATING	CODE	OFFICE RESPONSIBLE FOR C	ORD! CODE	DRD PREPA	ARED BY:	DATE <sup>-</sup>	CONTRACT	DRD NO.:
REQUIREMENT:	QA	S. S. ISIDEL TON (		l	F. Smyth	7/28/67	NO.:	OA. 011
TITLE OF BOOLEST	المثريا			L 1.	F. Smyth		TASK OR	QA-011 DRL ITEM
TITLE OF DOCUMENT:				1	ORGANIZATION RI		SUBTASK:	NO.:
DIANI TERTA		ATING FOR CRE	CTAT		Quality Assı	ırance	1 1	Į
•		RATING, FOR SPE	CIAL		DRGANIZATION	UNUNULL	DIRL NO	LEVEL NO.:
TEST EQUIPME	ли1, (ST	E), COMPONENT			FOR DOCUMENT R			
							·	
					ORGANIZATION R FOR DOCUMENT D		DDL NO.;	FILE NO.:
TYPE OF DOCUMENT:	CONTROL (	DACTION DREFERENCE	O INFORM	IATION	, ON DOCUMENT D	AUTRIDUTIUN.		
USE OF DOCUMENT:	·				ORGANIZATION R	ESPONSIBLE	NO OF (	COPIES.
To document the	detailed	d checkout procedu	re of th	e test	FOR DOCUMENT		5	
		ing with flight hard						
1		6 Inglit half			ESTIMATED N			ION CUTOFF
					ON SINGLE PRI	LI ANATION	שלוב טע ו	WILLS I UNE.
					ECTIMATES	ST / A\	DATE D	ATA DUE
INTERRELATIONSHIP WITH	OTHER DATA	REQUIREMENTS:			ESTIMATED CO FOR SINGLE PRI			ATA DUE JSER.
							1	
TE-001, Plan,	Integrated	d Test			FREQUENCY (	OF ISSUE:	PUBLICAT	ION DATE.
					O ANNUALLY	i.v.	HDR	1
					O SEMI-ANNUAL O QUARTERLY	LLY		
					O BI-MONTHLY O MONTHLY	İ		REQUENCY STONE):
CLASSIFICATION:		O GROUP I			O SEMI-MONTHL O 81-WEEKLY	ĽΥ	Through	,
O SECRET O CONFIDENTIAL		O GROUP 2 O GROUP 3	O SPECIAL O NASA DIS		O WEEKLY	:		MATED
SECRET RESTRICTED O CONFIDENTIAL REST		O GROUP 4	O JPL DIS	CREET	O DAILY OTHERWISE, A	S SPECIFIED	EXPIRATION	
TUNCLASSIFIED	DAIA		O NOFORN	. Jointel	As requir	ed		
DRM OF DATA: ,	KIND	O OF DATA.			REFERENCE DOC	UMENTS:		
🕱 PRINTED DOCUM	/ENT	O ABSTRACT	☐ INSTR	RUCTION	İ			
O CHART		O BROCHURE	O LETTE	ER	İ			
O DIAGRAM		O BULLETIN	O LIST		I			
O DRAWING	MOTION"	O CATALOG	O LOG	141	I			
O FILM (STATIC OR O ILLUSTRATION	IVIO I ION)	O CONTRACT O DIRECTIVE	O MANU	JAL DRANDUM	I			
O ILLUSTRATION O MODEL		O DISCLOSURE	O MINU		İ			
RECORDING (TAP	E OR DISC)	O ENGINEERING CHANGE	₩ PLAN		APPLICABLE STA	NDARDS.		
O COMPUTER CARD	*	ORDER	O PROC		İ			
O COMPUTER TAPE		☐ REQUEST FOR ENGINEE			I			
O MICROFILM (\)/O	R W/O CARD)	ING CHANGE PROPOSA	_		I			
O OTHER		O ENGINEERING CHANGE	SCHE		İ			
<del></del>		PROPOSAL O HANDROOK		IFICATION DARD	İ			
		O HANDBOOK O INDEX	O STANI		I			
					<u></u>			
REVIEWS AND/OR APPRO		RED:			<u> </u>			
LIST IN ORDER OF SUBI	,	DRAFT	DATE		PREPUBLICATION	PROOF	L	ATE
	L		PVIE		THE UDEICATION	, NOOF	U.	
CUDAIT FOR BELLET								
SUBMIT FOR REVIEW TO:		<u> </u>						
'		ВҮ					BY	
,								
		<del></del> -						
		<del></del> -						
SUBMIT FOR								
APPROVAL TO		BY					ВҮ	
] .	Manager	<b>, Quality Ass</b> uranc	e					

PAGE LOF 2

JPL 2568 ℃T 6'

CI LAMBIT DED GIS VII	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
Quality Assurance engineer witnesses the checkout and operation of the test equipment and verifies the adequacy of the performance to the test procedure.	QA-01
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
ì	
<ol> <li>Description of the test equipment.</li> <li>Detail of the parameters to be tested for and checkout procedures for each parameters and peripheral equipment needed to supplement the test equipment.</li> <li>Initial wiring checkout procedures.</li> <li>Operational checkout with a simulated test procedure and a sample data sheet.</li> <li>Special precautions to be taken by operator to assure confidence in the data are of the test.</li> </ol>	

VOYAGER DATA REQUIREMENT DESCRIPTION					DRD APPROVED B	Υ.	DATE:	DATA CATEGORY:
ORGANIZATION ORIGINATING	CODE:	OFFICE RESPONSIBLE FOR	DRD: COD	E DRD PREP	ARED BY:	DATE	CONTRACT	DRD NO.:
REQUIREMENT.	QA			1	Smyth	7/28/67	NO.	QA-012
TITLE OF BOOLEVENT					ORGANIZATION R		TASK OR	DRL ITEM
TITLE OF DOCUMENT:					FOR DOCUMENT P		SUBTASK:	NO.:
					Quality Ass	urance		
					ORGANIZATION R		DRL NO.:	LEVEL NO.:
PROCED	URE, PR	OCESS CONTROI			FOR DOCUMENT R		_	
		, , , , , , , , , , , , , , , , , , ,	<del> </del>		ORGANIZATION R FOR DOCUMENT D		DD. NO.:	FILE NO
TYPE OF DOCUMENT:	CONTROL	DACTION DREFERENCE	□ INFO	RMATION				l
USE OF DOCUMENT:				_	ORGANIZ <b>ATIO</b> N R		NO OF	COPIES
i '		step operating inst			FOR DOCUMENT	T STOWAGE.	10	)
process-oriente	ed inspec	tions such as radi	ograph	y and		·	<u> </u>	
ultrasonic test.	These p	procedures will su	pplem	ent those	ESTIMATED M			ION CUTOFF MILESTONE:
contained in Ma	ınufacturi	ng Standing Instru	ctions		. OR SHOLL FRI	LI ARATION.	DATE OR	
		<u>.</u>				OOT ( 6)	DATE D	ATA DUE
INTERRELATIONSHIP WITH	OTHER DATA	REQUIREMENTS:	<del> </del>	·	ESTIMATED C FOR SINGLE PR	UST (\$) EPARATION.		ATA DUE - JSER.
			one A	(CIa)	1			
1	_	Standing Instructi	ons (N	1 <b>3</b> 18)	FREQUENCY	OF ISSUE:	DI IRI ICAT	ION DATE
MG-009, Plan,		•			□ ANNUALLY	J. 1000L.		
QA-009, Plan,	Quality A	Assurance Program	m		O SEMI-ANNUAI	LLY	SD	R
					O QUARTERLY  BI-MONTHLY		UPDATE (F	REQUENCY
					MONTHLY O SEMI-MONTHI	ıv	OR MILE	ESTONE)
CLASSIFICATION: O SECRET		O GROUP I O GROUP 2	O SPECI	AL HANDLING	☐ 81-WEEKLY	L1	Through	h CDR
CONFIDENTIAL SECRET RESTRICTED	DATA	☐ GROUP 3 ☐ GROUP 4	O NASA	DISCREET	O WEEKLY  DAILY			MATED
O CONFIDENTIAL REST		□ PROPRIETARY	O PROJE	CT DISCREET	TOTHERWISE, A	AS SPECIFIED	EXPIRATI	ON DATE
X UNCLASSIFIED		O PUBLIC DOMAIN	O NOFO	RN	One time			
FORM OF DATA:	KIND	O OF DATA:			REFERENCE DOC	UMENTS:		
PRINTED DOCUI	MENT	O ABSTRACT	O INS	STRUCTION	NPC 200	-2, 200-	3, 200-4	
O CHART		O BROCHURE	O LE	TTER		,	-,	
O DIAGRAM		O BULLETIN	O LIS					
O DRAWING		O CATALOG	☐ LO					
O FILM (STATIC OR	MOTION)	O CONTRACT	_	NUAL				
O ILLUSTRATION		O DIRECTIVE		MORANDUM				
O MODEL  D RECORDING (TAR	DE UB DISCI	☐ DISCLOSURE ☐ ENGINEERING CHANGE	_	NUTES AN	APPLICABLE STANDARDS:			
O COMPUTER CAR	,	ORDER		OCEDURE		-		
O COMPUTER TAP		REQUEST FOR ENGINEE						
☐ MICROFILM (₩/(		ING CHANGE PROPOS						
O OTHER		O ENGINEERING CHANGE	□ sc	HEDULE	1			
		PROPOSAL	O SP	ECIFICATION	1			
		O HANDBOOK		ANDARD				
		O INDEX	O VO	UCHER	į.			
REVIEWS AND/OR APPRO	OVALS DEOU	PED.		· · · · · · · · · · · · · · · · · · ·	<del>-1</del>		<del></del>	
(LIST IN ORDER OF SUB		NLU.						
1	I	DRAFT	DATE		PREPUBLICATION	PROOF	D	ATE
SUBMIT FOR REVIEW TO								
		BY					ВҮ	
				_				
		_						
SUBMIT FOR							ВҮ	
APPROVAL TO								
	Manager	<u>, Quality Ass</u> uranc	с <u>е</u>					

PAGE I OF 2

	GE EXHIBIT DRD QA-012	
	VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIA	L INSTRUCTIONS:	DRD NO.: QA-01;
	•	
CDECIAL	DISTRIBUTION (LE DISTRIBUTION LE NOT COVERED DY AN EVISTING DOL WRITE IN DISTRIBUTION RELOWA	
SPECIAL	L DISTRIBUTION. (IF OISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN, DISTRIBUTION BELOW)	
OUTLIN	NE OF CONTENTS:	
1.	Procedure defines the process to be controlled.	
2.	Document the parameters to be controlled for the preparation of the material.	ainad
3.	Delineate all controls for the fabrication process by specific conditions to be maintaduring the processing.	amed
4. 5.	Define the methods of verification and documentation of the process verification. Describe method of verification and the maintenance of special environments to be maintained.	
6.	References the workmanship standards to be followed.	

VO	DRD APPROVED BY	DATE:	DATA CATEGORY:						
<b>-</b>						7		DRD NO.:	
ORGANIZATION ORIGINATING REQUIREMENT:	1	OFFICE RESPONSIBLE FOR	R DRD: C	1		DATE:	CONTRACT NO.:		
	QA			T. Sn	nyth	7/28/67		QA-013	
TITLE OF DOCUMENT:					ORGANIZATION RE		TASK OR	DRL ITEM	
					FOR DOCUMENT P		SUBTASK:	NO.:	
DD OCEDIDE 1	Quality Ass	Quality Assurance							
PROCEDURE, TEST/INSPECTION					ORGANIZATION RI		DRL NO	LEVEL NO.:	
					FOR DOCUMENT RE	=PRODUCTION;			
					ORGANIZATION RI		DDL NO.:	FILE NO.:	
TYPE OF DOCUMENT	CONTROL	DACTION DOCTORNO	- 0 101	TODA MATION.	FOR DOCUMENT D	ISTRIBUTION,			
USE OF DOCUMENT	CONTROL	DACTION DREFERENCE	. UIN	FORMATION					
	00000***	anagifia tout linan			ORGANIZATION R FOR DOCUMENT		NO OF	COPIES	
1	-	specific test/inspe				0.0102	10		
procedures to be	e periori	ned on the system	1/subs	ystem.	FOTIMATED	ANUGUEO	INICODMAT	ON CUTOFF	
					ESTIMATED M FOR SINGLE PRE			MILESTONE:	
					ESTIMATED CO	DST ( & )	DATE DATA DUE		
INTERRELATIONSHP WITH	OTHER DATA	REOUIREMENTS:			FOR SINGLE PRE		TO L		
MG-004, Manuf	acturing	Standing Instructi	ons (I	MSIS)					
QA-006, Manual	l, Workn	nanship Standards	S		FREQUENCY C	OF ISSUE	PLIBLICAT	ION DATE	
OA-009, Plan, 0	Ouality A	Assurance Progra	m		☐ ANNUALLY	0002	PUBLICATION DATE		
1	-	and Limited Life 1			O SEMI-ANNUAL	LY.	SD	)R	
RA-005, List, I					☐ QUARTERLY ☐ BI-MONTHLY		UPDATE (F	REQUENCY	
CLASSIFICATION:	arts rip				☐ MONTHLY ☐ SEMI-MONTHL	<b>v</b>	OR MILE	STONE)	
□ SECRET		GROUP I GROUP 2	☐ SPE	CIAL HANDLING	☐ 81-WEEKLY		rhrough	ı CDR	
O CONFIDENTIAL  SECRET RESTRICTED	DATA	☐ GROUP 3 ☐ GROUP 4	□ NAS.	A DISCREET DISCREET	☐ WEEKLY ☐ DAILY			IATED	
O CONFIDENTIAL REST		A ☐ PROPRIETARY	☐ PRO	JECT DISCREET	X OTHERWISE, A	\$ SPECIFIED	EXPIRATION	ON DATE	
M UNCLASSIFIED		☐ PUBLIC DOMAIN	□ NOF	DRN	One time				
FORM OF DATA: ,	KIN	D OF DATA.			REFERENCE DOCU	JMENTS:			
X PRINTED DOCUM	MENT	O ABSTRACT	□ II	NSTRUCTION					
O CHART		O BROCHURE	O L	ETTER					
☐ DIAGRAM		☐ BULLETIN	O L	IST					
☐ DRAWING		O CATALOG	O L	OG					
☐ FILM (STATIC OR	MOTION)	☐ CONTRACT	O M	IANUAL					
☐ ILLUSTRATION		O DIRECTIVE		IEMORANDUM					
□ MODEL		O DISCLOSURE		MINUTES	ABBUIGABLE STA	UDA DDO			
O RECORDING (TAP	*	O ENGINEERING CHANGI			APPLICABLE STAI	NDARDS.		*	
COMPUTER CARD		ORDER	_	ROCEDURE					
O COMPUTER TAPE		☐ REQUEST FOR ENGINE  ING CHANGE PROPO							
☐ MICROFILM (₩/.0 O OTHER	R W/U CAKD)	O ENGINEERING CHANGI		CHEDULE					
OOHEK		PROPOSAL		PECIFICATION					
		O HANDBOOK		TANDARD					
		O INDEX		OUCHER					
	<del></del>				<u></u>	·			
REVIEWS AND/OR APPRO		IRED:							
(LIST IN ORDER OF SUBI		DRAFT	DAT	F	PREPUBLICATION	PROOF	ח	ATE	
			ואט	-	. REI OBLIGATION	. 1.001	וט		
SUBMIT FOR REVIEW TO									
SUBMIT FOR REVIEW TO' .	<del></del>		****				<del></del>		
		BY		<del></del>			ВҮ		
				<del></del>				<del></del>	
				· · · · · ·			<u></u>	·	
_							******************************		
						<del></del>			
SUBMIT FOR APPROVAL TO	<del>, , , , , , , , , , , , , , , , , , , </del>	BY					BY	<del></del>	
*** I NOVAL TO	Manage	r, Quality Assura	nce	<del></del>			-		
	manage	, Quality 1135ula		<del></del>			<del></del>		

GE LAHIDIT DAD QA-VIS	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS:	DRD NO.: QA-01
Specific detailed procedures are written for each inspection and test operation. A DRD at the subcontractor/vendor level similar in content to this DRD is required.	<u> </u>
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
•	
i	

#### OUTLINE OF CONTENTS:

- 1. Identifies the article to be inspected or tested by its specific drawing number, latest revision, serial and lot number.
- 2. Defines the objectives of test/inspection.
- 3. Specifies the equipment to be used including the range, accuracy required, and type.
- 4. Details the test operator's /inspector's operation to be performed, the exact method of measuring or testing.
- 5. Details the exact conditions to be maintained during test/inspection including environmental and precautions for the protection of article and instruments.
- **6.** Establishes the criteria for acceptance or rejection of the article being tested or inspected including workmanship standards.
- 7. Identifies the test specifications and the test procedures to be followed (standing instructions).
- 8. Reports the test cycle and schedule to be followed.

V0.V0.T0.T0.T0.T0.T0.T0.T0.T0.T0.T0.T0.T0.T0	DRD APPROVED	BY	DATE:	DATA CATEGORY:			
VOYAGER DATA	REQUIREMENT DESCRIPTION					,	
ORGANIZATION ORIGINATING CODE:	OFFICE RESPONSIBLE FOR D	RD: CODE	DRD PREPA	ARED BY:	I DATE.	CONTRACT	DRD NO.:
REQUIREMENT. QA			J. R	Gottshall	7/28/6 7	NO.:	QA-014
TITLE OF DOCUMENT:	The state of the s			ORGANIZATION		TASK OR	DRL ITEM
				FOR DOCUMENT		SUBTASK:	NO.;
				Quality As			
PROCEDURE	, REWORK			(IRGANIZATION FOR DOCUMENT		DRL NO.	LEVEL NO.:
				ORGANIZATION	RESPONSIBLE	DOL NO.:	FILE NO
TVP5 05 000 (M5N7)				I'OR DOCUMENT	DISTRIBUTION:		
	DACTION DREFERENCE	INFORM	ATION	·			
USE OF DOCUMENT.				FOR DOCUME	NT STOWAGE:	NO OF	
						51	0
To outline the steps and a	approvals required	to -		ESTIMATED			ON CUTOFF
process any rework.				FOR SINGLE P	'REPARATION'	DATE OR MILESTONE	
INTERRELATIONSHIP WITH OTHER DATA	REQUIREMENTS:		,	ESTIMATED FOR SINGLE F	COST ( \$ ) PREPARATION.		ATA DUE JSER:
MG 000 Pl M C							
MG-009, Plan, Manufact	_			FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE:
RA-009, Plan, Reliabilit	•			O ANNUALLY	141137	PD	R
RA-014, Standard, Rewo	ork			O SEMI-ANNU  QUARTERLY			REQUENCY
				O BI-MONTHL O MONTHLY		OR MILI	ESTONE):
CLASS IFICATION:	O GROUP I O GROUP 2	m special	HANDLING	O SEMI-MONT	THLY	As Rec	juired h CDR
O CONFIDENTIAL O SECRET RESTRICTED DATA	O GROUP 3	O NASA DIS O JPL DIS	SCREET	O WEEKLY O DAILY		ESTIN	MATED
☐ CONFIDENTIAL RESTRICTED DATA	O PROPRIETARY	O PROJECT		One tim	E,AS SPECIFIED	EXPIRATI	ON DATE:
M UNCLASSIFIED	O PUBLIC DOMAIN	O NOFDRN	·	<del>                                     </del>		<u>L</u>	
i	O OF DATA.	<b>5</b>		REFERENCE DO			
№ PRINTED DOCUMENT O CHART	☐ ABSTRACT O BROCHURE	O LETTI		NPC 200	J-2		
O DIAGRAM	O BULLETIN	O LIST	-10			• •	
O DRAWING	O CATALOG	O LOG					
☐ FILM (STATIC OR MOTION)	O CONTRACT	O MANU	JAL				-
O ILLUSTRATION	O DIRECTIVE		RANDUM				
☐ MODEL ☐ RECORDING (TAPE OR DISC)	O DISCLOSURE O ENGINEERING CHANGE	☐ MINU		APPLICABLE S	TANDARDS		·
☐ COMPUTER CARD	ORDER	☐ PROC					
O COMPUTER TAPE	O REQUEST FOR ENGINEER	R- 🗆 REGU	ILATION				
☐ MICROFILM (W/OR W/O CARD)	ING CHANGE PROPOSA	_					
O OTHER	<ul><li>ENGINEERING CHANGE</li><li>PROPOSAL</li></ul>	O SPEC	DULE IFICATION				
	O HANDBOOK	O STAN					
	O INDEX	O VOUC					
DEVIEWS AND/OD ADDROVALS SECU	DED.			•			
REVIEWS AND/OR APPROVALS REQUI	NEU.						
I	DRAFT	DATE		PREPUBLICATIO	N PROOF	D	ATE
•							
SUBMIT FOR REVIEW TO:							
	BY -					ВҮ	
	<del></del> -						
	<del></del>						
	<del></del>						
SUBMIT FOR						ВҮ	
APPROVAL TO  Manager	Quality Assurance					-· —	
Manager,	quarry Assurance						

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS'  QA-	NO.:
The procedure will implement and conform to the rework policies specified by the Reliability Section.	
-	
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:	
l. Purpose 2. Scope	
<ul><li>3. Definitions</li><li>4. Responsibilities</li></ul>	
5. Procedures	
(CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)	

-2-

VOYAGER DATA REQUIREMENT DESCRIPTION						DRD APPROVED BY	DATE:	DATA CATEGORY.	
ORGANIZATION ORIGINATING	CODE:	OFFICE RESPONSIBLE F	OR DRD	CODE	DRD PREP	ARED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT:	QA	ON THE MEST CHOIDER !	on bito.	00,02.	T. F. S	_	7/28/67	NO.:	
	<del> </del>	<del>,</del>	<u> </u>	1.F. S			TACK OF	QA-01	
TITLE OF DOCUMENT:						ORGANIZATION RE		TASK OR SUBTASK	
						Quality Ass	urance		
PROCEDURE, A	AREA C	ONTROL .			DRGANIZATION RI	ESPONSIBLE	DRL NO	LEVEL NO.	
	<u> </u>			1		ORGANIZATION R FOR DOCUMENT D		DDL NO.;	FILE NO.:
TYPE OF DOCUMENT:	ONTROL	DACTION DREFEREN	ICE 🗆	INFORM	MATION				İ
USE OF DOCUMENT:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					ORGANIZATION R		NO OF	COPIES
T. 1.1					- 1	FOR DOCUMENT	STOWAGE.	10	ł
To control the re									· · · · · · · · · · · · · · · · · · ·
for the cleanline						ESTIMATED M FOR SINGLE PRE			TION CUTOFF MILESTONE
to maintain the	required	quality level in	these	e are	eas.				
			_			ESTIMATED CO	OST ( \$)	DATE	DATA DUE
INTERRELATIONSHIP WITH						FOR SINGLE PRE	PARATION:		USER
MG-009, Plan,		•						<b>i</b>	
QA-009, Plan,						FREQUENCY (	OF ISSUE:	PUBLICA	TION DATE.
SE-021, Genera	_	_	tion,			O ANNUALLY	PDR		
	tic Clea					SEMI-ANNUAL O QUARTERLY	.LY		
SE-023, Genera	al Engin	eering Specifica	ition, (	Clea	nliness	BI-MONTHLY O MONTHLY			(FREQUENCY LE STONE)
CLASS IFICATION:		☐ GROUP I				SEMI-MONTHL 81-WEEKLY	Υ.Υ	Throu	gh CDR
SECRET  CONFIDENTIAL		☐ GROUP 2 O GROUP 3			HANDLING SCREET	O WEEKLY		EST	IMATED
SECRET RESTRICTED D CONFIDENTIAL RESTR	ATA ICTED DATA	☐ GROUP 4 O JPL DISCREET ☐ PROPRIETARY ☐ PROJECT DISCREET				O DAILY DX OTHERWISE, A	S SPECIFIED		TION DATE
d unclassified		☐ PUBLIC DOMAIN	O NO	OFORN		One tim	e	<u> </u>	
FORM OF DATA: ,	KINC	O OF DATA.				REFERENCE DOC	JMENTS.		
₹ PRINTED DOCUME	ENT	O ABSTRACT		INSTE	RUCTION				
O CHART		□ BROCHURE		LETT	ĒR				
O DIAGRAM		☐ BULLETIN	О	LIST					
☐ DRAWING		☐ CATALOG		LOG					
☐ FILM (STATIC OR M	MOTION)	O CONTRACT		MANU					,
☐ ILLUSTRATION☐ MODEL		☐ DIRECTIVE ☐ DISCLOSURE		MINU.	)RANDUM				
RECORDING (TAPE	OR DISC)	☐ ENGINEERING CHAN		PLAN		APPLICABLE STA	NDARDS:		
☐ COMPUTER CARD	01. 2.00,	ORDER							
O COMPUTER TAPE		☐ REQUEST FOR ENG	INEER- 🖫	REGU	ILATION				
☐ MICROFILM(W/OR	W/O CARD)	ING CHANGE PRO	POSAL O	REW	RT				
O OTHER		ENGINEERING CHAP PROPOSAL		SCHE	DULE IFICATION				
-1,	<u> </u>	□ HANDBOOK		STAN					
		☐ INDEX		VOUC					
REVIEWS AND/OR APPROV (LIST IN ORDER <b>OF</b> SUBM	ITTAL)	<del></del>	<u>:</u>	DATE		PREPUBLICATION	PROOF	:	DATE
SUBMIT FOR REVIEW TO' -									
-			, —						
_		B,	r					ВҮ	
-									
ļ			_						
_									
SUBMIT FOR APPROVAL TO		В	Υ					BY	
ATTROVAL TO	Project Manager								
l –	- roject								

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

#### SPECIAL INSTRUCTIONS:

required.

ORD NO.: QA - 01

The Quality Appraisal function will define the criteria of the environments for the facilities where hardware will be built, tested, packaged and stored. This criteria will establish limits for cleanliness and handling as required by the customer's contract.

A plan of controlling, auditing, and reporting will be incorporated into the area requirement specifications. A DRD at the subcontractor/vendor level similar in content to this DRD is

SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

#### **OUTLINE OF CONTENTS:**

- 1. Identify area of control.
- 2. Define the levels of control.
  - a. Temperature
  - b. Humidity
  - c. Particle count
  - d. Audit period
  - e. Storage and handling
- 3. Define method of controlling contamination.
  - a. Material, floors, furniture, and tools.
  - b. Clothing, shoes
  - c. Protective clothing
- 4. Maintenance schedules and methods to be used.
- 5. Frequency of measurement of area contamination level.
- 6. Maintain capability control charts in each area.
- 7. Training of personnel. Information manual.

VC	DRD APPROVED	BY:	DATE:	CATEGORY CATEGORY					
ORGANIZATION ORIGINATING REQUIREMENT	CODE:	OFFICE RESPONSIBLE FOR D	RD: CODE	DRD PREPA		DATE' 7/28/67	CONTRACT NO.	DRD NO.: QA-016	
TITLE OF DOCUMENT:	<u></u>	and the second s	. 1		DRGANIZATION FOR DOCUMENT Quality As:	RESPONSIBLE PREPARATION	TASK OR SUBTASK: DRL NO.:	DRL ITEM NO:	
RECC	RD, CAI	LIBRATION			ORGANIZATION   FOR DOCUMENT	REPRODUCTION:	DRL NO	LEVEL NO.:	
TYPE OF DOCUMENT:	I CONTRO!	DACTION BOSSESSION	M ILIEAS:	AATION	ORGANIZATION FOR DOCUMENT		DDL NO.;	FILE NO.	
<u></u>	CONTROL	DACTION DREFERENCE	🌣 INFORM	MATION		55050100515			
USE OF DOCUMENT:  An established	automati	c computerized red	call sw	stem	ORGANIZATION FOR WCUMEN		NO OF	COPIES'	
		struments to mainta	-				5	;	
1		spection and test of			ESTIMATED			ION CUTOFF	
		ng wear patterns a	•		FOR SINGLE PF	REPARATION:	DATE OR	MILESTONE:	
cycles.		o car patterns a	allul			000-145		ATA BUT	
INTERRELATIONSHIP WITH	OTHER DATA	REQUIREMENTS:			ESTIMATED FOR SINGLE PI			ATA DUE JSER	
QA-009. Plan.	Quality	Assurance Progran	n						
	-	and Gauge Usage			FREQUENCY	OF ISSUE.	PUBLICAT	ION DATE.	
1		quipment Calibration	on and		☐ ANNUALLY		PDR		
Checl					O QUARTERLY	ALLY			
					☐ 81-MONTHLY O MONTHLY		OR MILE	FREQUENCY ESTONE).	
CLASS IFICATION:		GROUP I	0.0050147	HANDUNG	SEMI-MONTH	HLY	Every Calibr	,	
SECRET CONFIDENTIAL		O GROUP 3	☐ NASA DIS	HANDLING SCREET	O WEEKLY O DAILY			MATED	
O CONFIDENTIAL REST	DATA RICTED DATA	O PROPRIETARY		CREET DISCREET	💆 OTHERWISE,		EXPIRATI	ON DATE:	
M UNCLASSIFIED		O PUBLIC DOMAIN	O NOFORN		As req		<u>L</u>		
FORM OF DATA:	KIND	OF DATA:			REFERENCE DO	CUMENTS:		;	
O PRINTED DOCUM	MENT	O ABSTRACT	☐ INSTE						
O CHART		O BROCHURE	O LETTE	ER .				:	
☐ DIAGRAM O DRAWING		O BULLETIN  CATALOG	O LIST		1				
O FILM (STATIC OR	MOTION)	O CONTRACT	O MANU	JAL					
O ILLUSTRATION	,	☐ DIRECTIVE		DRANDUM					
O MODEL		O DISCLOSURE	O MINU		<u> </u>			<u> </u>	
O RECORDING (TAP	,	O ENGINEERING CHANGE	C PLAN		APPLICABLE STANDARDS.				
O COMPUTER CARI		ORDER  REQUEST FOR ENGINEER	O PROC						
☐ MICROFILM (₩/0		ING CHANGE PROPOSAL							
Ø OTHER		☐ ENGINEERING CHANGE	□ SCHE						
Historical I	File	PROPOSAL	☐ SPEC	IFICATION					
	<del></del>	O HANDBOOK	O STAN						
		O INDEX	O VOUC	HEK					
REVIEWS AND/OR APPRO	VALS REOUI	RED:			•	e erest erest ereste ere		<del></del>	
(LIST IN ORDER OF SUBI	,	DRAFT	DATE		PREPUBLICATION	N PROOF	-	ATE	
	L	ZIVAL I	DATE		. REI OBLIGATION	· INOUF	U	ALL	
CLIDMIT HOD DEVIEW TO									
SUBMIT FOR REVIEW TO:									
		ВҮ					вү		
SUBMIT FOR							ВҮ ——		
APPROVAL TO									
	vianager,	Quality Assurance	2						

PAGE IOF 2

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

### SPECIAL INSTRUCTIONS:

DRD NO.:  $\mathrm{QA-01f}$ 

Automatic data processing techniques are utilized by the Instrument Control Section to assure periodic recall of measurement and test equipment for calibration purposes. A DRD at the subcontractor/vendor level similar in content to this DRD is required.

SPECIAL DISTRIBUTION, (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

#### OUTLINE OF CONTENTS:

### The record contains:

- 1. Inventory control number
- 2. Equipment name
- 3. Manufacturer's name
- 4. GE drawing number/model no.
- 5. Serial number
- 6. Range
- 7. Responsible operation
- 8. Responsible custodian
- 9. Last inventory date

- 10. Condition code
- 11. Calibration cycle
- 12. Calibration date (due)
- 13. Present location
- 14. Part number
- 15. Purchase order of instrument
- 16. Listing of repairs made at calibration
- 17. Data points performed at each calibration
- 18. Name **of** personnel performing the calibration

				DRD APPROVED	BY:	DATE	DATA CATEGORY:
VOYAGER DATA F	REQUIREMENT DESCRIPTION						CATEGORY.
ORGANIZATION ORIGINATING CODE:	OFFICE RESPONSIBLE FOR	DBD CODE	DRD PREPA	ARED BY:	DATE'	CONTRACT	DRD NO.
REQUIREMENT QA	OTTIOE REOF ONOIDEE FOR	DRU. GODE		Smyth	17/28/67	NO.	<b>C</b> \$A-017
TITLE OF DOCUMENT:			1.1	ORGANIZATION		TASK OR	DRL ITEM
THEE OF BOOKMENT.					F PREPARATION	SUBTASK.	NO
				Quality A	ssurance		
RECORD, SHE	LF LIFE			ORGANIZATION	RESPONSIBLE REPRODUCTION:	DRL NO.	LEVEL NO.
	•			TOR DOCUMENT	REPRODUCTION.		
	e)			ORGANIZATION	RESPONSIBI F	DDL NO.:	FILE NO
TYPE OF POSITIVE INTERPRETATION	Carlon 1	· · · · · · · · · · · · · · · · · · ·			T DISTRIBUTION:	DDL 140	1122107
	DACTION DREFERENCE	☑ INFORM	IATION	<b></b>			
USE OF DOCUMENT		1	,		RESPONSIBLE ENT STOWAGE	NO OF	COPIES
To control the use of ma						1	0
age deterioration and dis	spose of material	semi	ESTIMATED	MANHOURS	INFORMAT	ION CUTOFF	
life is expended.				FOR SINGLE F	PREPARATION	DATE OR	MILESTONE:
INTERRELATIONSHIP WITH OTHER DATA			. ,	ESTIMATED FOR SINGLE F	COST (\$) PREPARATION	8	ATA DUE JSER
QA-009, Plan, Quality A		m					
RA-009, Plan, Reliabili				FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE.
SE-001, Plan, Engineer	-			☐ ANNUALLY			
SE-016, Specification,				O QUARTERLY		HD	
SE-028, List, Approved	l Materials			O 81-MONTHL'  MONTHLY	Y	OR MILE	FREQUENCY ESTONE)
CLASSIFICATION:	☐ GROUP I ☐ GROUP 2	O SPECIAL	HANDLING	☐ SEMI-MONT ☐ BI-WEEKLY		Maintai	n cur- u launch
O CONFIDENTIAL  SECRET RESTRICTED DATA	O GROUP 3  GROUP 4	□ NASA DIS	CREET	□ WEEKLY □ DAILY		ESTIN	MATED
O CONFIDENTIAL RESTRICTED DATA	□ PROPRIETARY	□ PROJECT		One tim	E,AS SPECIFIED	EXPIRATI	ON DATE:
M UNCLASSIFIED	D PUBLIC DOMAIN	O NOFORN					
	OF DATA.	<b>5</b> NOTE	LICTION	REFERENCE DO	OCUMENTS:		
☐ PRINTED DOCUMENT ☐ CHART	□ ABSTRACT □ BROCHURE	☐ INSTR					
□ DIAGRAM	D BULLETIN	☐ LIST	.10				
☐ DRAWING	□ CATALOG	□ LOG					
☐ FILM (STATIC OR MOTION)	☐ CONTRACT	☐ MANU					
O ILLUSTRATION  D MODEL	□ DIRECTIVE □ DISCLOSURE	□ MEMO					
RECORDING (TAPE <b>OR</b> DISC)	☐ ENGINEERING CHANGE	☐ MINUT	ES	APPLICABLE S	TANDARDS		
COMPUTER CARD	ORDER	☐ PROCI	EDURE				
O COMPUTER TAPE	☐ REPUEST FOR ENGINEE	R- 🗖 REGU	LATION				
O MICROFILM (W/OR W/O CARD)	ING CHANGE PROPOS.						
X OTHER Label	PROPOSAL		FICATION				
	☐ HANDBOOK	☐ STANE					
	□ INDEX	□ VOUCH					
REVIEWS AND/OR APPROVALS REQUIR	ED.		<del></del>				
(LIST IN ORDER OF SUBMITTAL)	LU.						
D	RAFT			PREPUBLICATIO	N PROOF	D	ATE
SUBMIT FOR REVIEW TO:							
	BY					ВҮ ——	
						-	
` <del></del>						-	
{ <del></del>							
SUBMIT FOR	BY					BY	
APPROVAL TO Managar		20					
<u>Manager,</u>	Quality Assurance	E					

PAGE I OF 2

<del>`</del>	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
The control of limited lifetime material is by means of shelf life labels permanently attached to the material. Determination of shelf life is made by reference to the suppliers instruction manual or special instructions supplied with the material or indication of shelf life limitations marked on the material by the Materials and Process Laboratory. A DRD at the subcontractor/vendor level similar in content to this DRD is required.	QA-01
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING, DOL WRITE IN DISTRIBUTION BELOW)  OUTLINE OF CONTENTS:	
The shelf lifetime label indicates the following information:  1. Material part no. and/or nomenclature.	
2. Purchase order number.	
3. Date not to be used after	
4. Temperature storage requirements.  5. Disposition routing for time data expired material	
5. Disposition routine for time date expired material.	

Date, Type of Material, Released to, Expiration Date of Material, Disposition of Material, etc.

the material and contains this information:

6. As each label is affixed to the container a permanent record is established for

VOVACES ST	TA DECLUDENCHT DECONORIES			DRD APPROVED B	<i>(</i>	DATE	DATA CATEGORY.
VOYAGER DA	TA REQUIREMENT DESCRIPTION	1					
	E: OFFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	RED BY:	DATE	CONTRACT NO.	DRD NO.
REQUIREMENT Q.	A		T. Smy	th	7/28/67	NO.	QA-018
TITLE OF DOCUMENT.	<u> </u>	····		ORGANIZATION RE		TASK OR SUBTASK:	DRL ITEM
				FOR DOCUMENT F	,	SUBINSK.	NO.:
RECORD TOOL	AND GAGE USAGE			ORGANIZATION R		DRL NO.;	LEVEL NO.:
indected, 100L	LIED OF TOLL OF TOLL	•		FOR DOCUMENT R		_ ,	
			4	OBCANIZATION -	ECDONOLO: 5	00: 2:4:	EILE NO.
	<u>Contractory of the support of the s</u>			ORGANIZATION R FOR DOCUMENT D		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: MICONTROL	DACTION DREFERENCE	□ INFORM	ATION				
USE OF DOCUMENT:		•	1 . 1	ORGANIZATION R FOR DOCUMENT		NO. OF	COPIES:
To assure, by docum measure dimension,					· · · · · · · · · · · · · · · · · · ·	5	
quality characteristic	•			ESTIMATED M			ION CUTOFF
prior to use and perior	•		-	FOR SINGLE PRI	PARATION:	DATE OR	MILESTONE:
continued accuracy.			- :	ESTIMATED C	OST (\$)	DATE D	ATA DUE
INTERRELATIONSHIP WITH OTHER DA	ATA REOUIREMENTS:			FOR SINGLE PRI		TO I	JSER:
MG-001, Drawings,			ixtures			HI	<del></del>
MG-002, *Drawings,	_			FREQUENCY (	OF ISSUE:	PUBLICAT	TON DATE.
QA-004, Manual, Qu	•	_	Ì	O ANNUALLY O SEMI-ANNUAL	.LY		
QA-009, Plan, Quali	ny Assurance Progr	am		QUARTERLY O BI-MONTHLY MONTHLY			FREQUENCY ESTONE)
CLASSIFICATION:	☐ GROUP I	<u></u>	<del>,</del>	O SEMI-MONTHI	_Y	Maințai	n cur-
O SECRET O CONFIDENTIAL	O GROUP 2 O GROUP 3	O NASA DI	HANDLING SCREET	81-WEEKLY		rent thr	u launch MATED
SECRET RESTRICTED DATA CONFIDENTIAL RESTRICTED D.	O GROUP 4 ATA O PROPRIETARY	D JPL DIS	CREET	S OTHERWISE,	S SPECIFIED	EXPIRATI	
<b>©</b> UNCLASSIFIED	O PUBLIC DOMAIN	□ NOFORN	····	DEFENSE SOS	IMENTO:	<u> </u>	
	C ARSTRACT	E NOT	DUCTION	REFERENCE DOC	UMENIS:		
PRINTED DOCUMENT O CHART	O ABSTRACT O BROCHURE	O LETTI					
O DIAGRAM	O BULLETIN	☐ LIST					
O DRAWING	O CATALOG	O LOG					
O FILM (STATIC OR MOTION)	O CONTRACT	□ MANI					
O ILLUSTRATION  D MODEL	O DIRECTIVE  DISCLOSURE	☐ MINU	DRANDUM TES				
RECORDING (TAPE OR DISC		_		APPLICABLE STA	NDARDS.	<del>- Langer   - Langer  </del>	
O COMPUTER CARD	ORDER	O PROC	EDURE				
O COMPUTER TAPE	REPUEST FOR ENGINE						
O MICROFILM (W/OR W/O CAR	,						
O OTHER	ENGINEERING CHANGE PROPOSAL		IFICATION				
	O HANDBOOK	O STAN					
	□ INDEX	O VOUC	HER				
REVIEWS AND/OR APPROVALS RE	OUIRĒD:	<del></del>	<del></del>				
(LIST IN ORDER OF SUBMITTAL)		B.4==		DDEDURE CONT.	DDCC5	=	
	DRAFT	DATE		PREPUBLICATION	PROOF	С	DATE
CUDMIT FOR DEVIEW TO							
SUBMIT FOR REVIEW TO:							
	ВУ					ВҮ	
1							
SUBMIT FOR APPROVAL TO	ВУ					ВΥ	
Mana	ger, Quality Assura	nce					
Ī							

\*Key Informal Data PAGE | OF 2

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2NO SHEET

### SPECIAL INSTRUCTIONS'

DRD NO.:  $\mathbf{QA-01}$ 

The control, identification, and recall of tools and gages are the responsibility of the Quality Appraisal Instrument and Calibration Laboratory. A DRD at the subcontractor/vendor level similar in content to this DRD is required.

SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

None

### OUTLINE OF CONTENTS:

The control, identification and recall capability is by means of a computerized system. The computer cards within this system contain the pertinent information for control.

- 1. I and C lab control number.
- 2. Supplier's identification number and nomenclature.
- 3. Purchase order number and cost.
- 4. Present location.
- 5. Tolerances.
- 6. Date of last calibration.
- 7. Frequency of calibration.
- a. Date of next calibration.

VOVACED DATA E	DECLUDEMENT DESCRIPTION			DRD APPROVED BY	DATE:	DATA CATEGORY.	
VOYAGER DATA F	REQUIREMENT DESCRIPTION						
BIEGUIDEMENT	OFFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	ARED BY.	DATE'	CONTRACT NO.:	DRD NO.:
QA			J.R. G	<b>o</b> ttshall	7/28/67	TASK OR	DRL ITE
TITLE OF DOCUMENT:				ORGANIZATION RE FOR DOCUMENT P	SPONSIBLE REPARATION'	subraor:	DRINO.TEM
RECORD, TEST				Quality Assu	ırance		,
1	ARTS, SUB-ASSE	EMBLIES	3)	ORGANIZATION RE		DRL NO.:	LEVEL NO.:
(1.2.2.2.2.2.3.2.3.1.1	, 505 11552		-,	TOR DOCUMENT RE	.F NODOG 11010.		
				ORGANIZ <b>ATI</b> ON RE		DDL NO.;	FILE NO.
TYPE OF DOCUMENT: TO CONTROL OF				FOR DOCUMENT DI	STRIBUTION:		
USE OF DOCUMENT:	DACTION DREFERENCE	X INFORM	MATION	ORGANIZATION RI	ESPONSIBLE	NO OF	COPIES
				FOR DOCUMENT		10	
To permanently record va	riable data <b>of</b> test	ting res	ults				ION CUTOEF
of flight hardware.			ESTIMATED M. FOR SINGLE PRE			ION CUTOFF:	
INTERRELATIONSHIP WITH OTHER DATA	REQUIREMENTS:		<u> </u>	ESTIMATED CO FOR SINGLE PRE			ATA DUE JSER'
QA-009, Plan, Quality As	ssurance						
QA-013, Procedure, Test	~			FREQUENCY C	F ISSUE:	PUBLICAT	ION DATE
TE-001, Plan, Integrated				☐ ANNUALLY ☐ SEMI-ANNUAL	.LY	HE	)R
TE-130, Plan, General T	est			QUARTERLY BI-MONTHLY			REQUENCY
CLASSIFICATION:	□ GROUP I	<del></del>		O SEMI-MONTHL	.Υ	Not	ESTONE).
☐ SECRET ☐ CONFIDENTIAL	GROUP 2 GROUP 3	SPECIAL NASA DI	HANDLING SCREET	D 81-WEEKLY		applicat	MATED
☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTED DATA	☐ GROUP 4 ☐ PROPRIETARY	☐ JPL DIS	CREET F DISCREET	a daily  or otherwise, a	\$ SPECIFIED	EXPIRATI	ON DATE:
X UNCLASSIFIED	A PUBLIC DOMAIN	NOFORN	<del></del>	As required		<u></u>	
	OF DATA:	<b></b>		REFERENCE DOCU	JMENIS: .		
PRINTED DOCUMENT	☐ ABSTRACT ☐ BROCHURE	□ INSTI	RUCTION ER				
DIAGRAM	□ BULLETIN	□ LIST		1			
DRAWING	☐ CATALOG ☐ CONTRACT	□ LOG □ MAN		-	NPC 20	0-2	
☐ FILM (STATIC OR MOTION) ☐ ILLUSTRATION	☐ DIRECTIVE	_	ORANDUM				
□ MODEL	☐ DISCLDSURE	☐ MINU	TES				
☐ RECORDING (TAPE OR DISC) ☐ COMPUTER CARD	☐ ENGINEERING CHANGE ORDER	O PROC	-	APPLICABLE STA	NDARDS:		
COMPUTER TAPE	REQUEST FOR ENGINEE						
MICROFILM (W/OR W/O CARD)	ING CHANGE PROPOS						
□ OTHER	ENGINEERING CHANGE PROPOSAL		DULE DIFICATION				
	☐ HANDBOOK	☐ STAN					
	□ INDEX	□ VOUC	CHER				
REVIEWS AND/OR APPROVALS REQUI	RED:			•			
LUIST IN ORDER OF SUBMITTAL)	DRAFT	DATE		PREPUBLICATION	PROOF		DATE
SUBMIT FOR REVIEW TO'							
						ВҮ —	
SUBMIT FOR APPROVAL TO	BY					ВҮ	
	, Quality Assuran	ce					

PAGE 10F 2 JPL 2568 OCT 6

GE EXHIBIT DRD QA-019	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS' Computer cards will be used for parts data.	DRD NO QA-01:
Preprinted data sheets will be used to record material and subassembly data.	
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	

### OUTLINE OF CONTENTS:

- **1.** Component name.
- **2.** Œ drawing number with most recent revision.
- 3. Vendor serial number.
- **4.** Vendor's name (not trademark).
- **5.** Vendor's test procedures number and revision.
- 6. The name, make, model number, vendor's identification number and calibration due date of the test equipment, gages or tools used.
- 7. Provisions for signatures of the vendor's and GE responsible representative(s).
- 8. A brief description of each test with a reference to the applicable paragraph in the vendor' test procedure (e.g., input power, continuity, frequency response, etc.).
- 9. Units of measure (e.g., ohms, ma, etc.).
- 10. Tolerances Given in limits, not percent (e.g., 4750-5250 ohms) except where measurement is in percent (e.g., harmonic distortion).
- **11.** Actual readings taken during tests. Do not record as pass or fail unless otherwise specified.
- **12.** Date of tests.
- **13.** Operating time matrix: includes hardware operating and nonoperating time in the testing environments.
- **14.** Identification of environment associated with each set of test readings.
- 15. The number of any failure reporting documents associated with the test. (CONTINUE ON THIRD SHEET, IF NECESSARY, AND AFFIX TO THIS DRD.)

VOVACE	D DATA F	DECLIDEMENT DESCRIPTION		<del> </del>	DRD APPROVED	BY	DATE:	DATA CATEGORY:
VOYAGE	N DAIA F	REOUIREMENT DESCRIPTION	N	<u> </u>		<u> </u>		
ORGANIZATION ORIGINATING	CODE: 0	OFFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	ARED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT	RA			T.F. S	hmyth	7/28/67	NO.	QA-020
TITLE OF DOCUMENT'	1111			1 1.11 . 12	ORGANIZATION		TASK OR	DRL ITEM
TITLE OF BOOOMENT					FOR DOCUMENT		SUBTASK:	NO.:
*PEDORT	EAII	URE ANALYSIS			Quality As	ssurance		
KLI OKI,		CONL ANALISIS			ORGANIZATION	RESPONSIBLE	DRL NO.'	LEVEL NO.:
					FOR DOCUMENT			
				:	ORGANIZATION FOR DOCUMENT		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: O CONT	ROL [	DACTION DREFERENCE	T INFOR	MATION				
USE OF DOCUMENT. TO do	cume	nt the investigator	ry steps	s in the	ORGANIZATION		NO. OF	COPIES:
analysis of a noncon	forma	ance including wha	at was t	he	FOR WOUMEN	IT STOWAGE	. 9	
problem, what cause	ed it,	and what is being	doné t	o prevenit			<del></del>	
recurrence.		_		ESTIMATED FOR SINGLE PE			ION CUTOFF	
Users: Quality App	raisal	l (FARB) - Reliab	ility -			/		
Design Engineering					ESTIMATED	COST (\$)	DATE DA	ATA DUE
INTERRELATIONSHIP WITH OTHE					FOR SINGLE PI			JSER!
QA-009, Plan, Qual				`				
QA-021, Report, No		•			FREQUENCY	OF ISSUE:	PUBLICAT	ION DATE.
RA-007, *Minutes,		•	w Boar	d (FARB)	O ANNUALLY		PD	R
RA-009, Plan, Relia	ability	Program			O SEMI-ANNUA O OUARTERLY		1100475 /	PEOUENCY
RA-015, Report, Fa	ilure	Review			81-MONTHLY  MONTHLY			REQUENCY ESTONE):
CLASSIFICATION:		O GROUP I	O ODEOW	LIANDLING	O SEMI-MONTI O 81-WEEKLY	HLY	Not app	licable
O SECRET  CONFIDENTIAL		O GROUP 2 O GROUP 3	O NASA D		a WEEKLY O DAILY			AATED .
<ul> <li>SECRET RESTRICTED DATA</li> <li>O CONFIDENTIAL RESTRICTE</li> </ul>		O GROUP 4 O PROPRIETARY	O PROJEC	SCREET T DISCREET	5 OTHERWISE	<b>'</b> .	EXPIRATI	ON DATE:
M UNCLASSIFIED		☐ PUBLIC DOMAIN	O NOFORM	<u> </u>	As required	<u>l</u>	<u> </u>	
FORM OF DATA:	KIND	OF DATA:			REFERENCE DO	CUMENTS;		
PRINTED DOCUMENT		O ABSTRACT	O INST	RUCTION				
☐ CHART		O BROCHURE	O LET					
DIAGRAM		O BULLETIN	O LIST	•				
☐ DRAWING O FILM (STATIC OR MOTI	ONI)	O CATALOG O CONTRACT	O MAN	11141	İ			
O ILLUSTRATION	ON)	O DIRECTIVE		IORANDUM				
□ MODEL		D DISCLOSURE	O MIN		1			
O RECORDING (TAPE OR	DISC)	O ENGINEERING CHANGE	_		APPLICABLE ST	TANDARDS:	······································	
O COMPUTER CARD		ORDER	O PRO	CEDURE				
O COMPUTER TAPE		O REQUEST FOR ENGINE						
MICROFILM (W/OR W/O	CARD)	ING CHANGE PROPOSE  ENGINEERING CHANGE						
O OTHER		PROPOSAL		CIFICATION				
	<del></del>	☐ HANDBOOK	O STAI					
		D INDEX	O VOU		1			
		the control of the co	<del> </del>		<u> </u>	······································	<del></del>	
REVIEWS AND/OR APPROVALS (LIST IN ORDER OF SUBMITTA		RED:						
(2.51 III SKELK OF GODWITTE		DRAFT	DATE		PREPUBLICATIO	N PROOF	D	ATE
SUBMIT FOR REVIEW TO'	<del> </del>		<u> </u>					
		<u></u>		<del></del>			<del></del> -	<u> </u>
<u></u>		BY		<u></u>			BY	
							5-	<del>-</del>
-						,		
			<del></del>	<del></del>		<del></del>	<del></del>	<del>- 1</del>
SUBMIT FOR APPROVAL TO		ВУ					BY	<del></del>
	lager	Quality Assuran	Ce	<del></del> -	<del></del>	<del></del>		
<u>Mai</u>	iagei,	wuality Assuran	<u> </u>			<del></del>	<del></del> _	

# VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET DRD NO.: SPECIAL INSTRUCTIONS. QA-02 In Section 3 of the contents, X-rays, pictures, sketches or other descriptive media should be used to completely describe the failure mechanism. A DRD at the subcontractor/vendor level similar in content to this DRD is required. The report will reference a number correlating it to a specific nonconforming material report. SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW) **OUTLINE OF CONTENTS:** Description of Failure Symptons - Includes what test the unit failed, under what conditions, the data (or measurement) and when. What Failed - What part, wire, module, bracket, etc., was the actual failure. 2. Analysis Steps - Description of the total steps taken to identify the failure and the **3.** effects of the failure on associated equipment. Corrective Action -, Whathas been done to prevent reoccurrence of the problem including reference to the documentation that accomplishes this.

	OED 5:=:	DEGUIDENT: TOTAL CONTROL OF THE CONT				DRD APPROVED BY	,	DATE	DATA CATEGORY
VOYA	AGER DATA	REQUIREMENT DESCRIPTION	N					i., ,	JARLOUNT.
ORGANIZATION ORIGINATING	CODE:	OFFICE RESPONSIBLE FOR	DRD: C	CODE:	DRD PREPA	RED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT:	QA					F. Smyth	7/28/67	NO.:	QA-021
TITLE OF DOCUMENT:	1 462.3	· · · · · · · · · · · · · · · · · · ·		1	٠.٠.	ORGANIZATION RE		TASK OR	DRL ITEM
TITLE OF DOCOMENT.						FOR DOCUMENT P		SUBTASK:	NO.:
						Quality Ass	urance		
*REPORT,	NONCO	ONFORMING MAT	TERL	AL		ORGANIZATION RE		DRL NO.	LEVEL NO
(NCMR)						FOR DOCUMENT RE	:PRODUCTION;		·
						000000000000000000000000000000000000000	-550000000		
						ORGANIZATION RE FOR DOCUMENT DI		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT: OC	ONTROL	DACTION DREFERENCE	_ ⊠ IN	NFORM	ATION		:		
USE OF DOCUMENT:		4	c		41	ORGANIZATION REFOR DOCUMENT		NO. OF	COPIES:
		to report noncon				FOR DOCUMENT	STOWAGE	1	)
1	•	nspection and test				FOTIMATED	AAULOUDC	INFORMAT	ION CUTOFF
	•	for nonconforman				ESTIMATED M FOR SINGLE PRE			VILESTONE:
_	ition of	the hardware to r	ewoi	rk,	MKB,	·			
failure analysis.	-		<del> </del>			ESTIMATED CO	ST (\$)		TA DUE
INTERRELATIONSHIP WITH C			(MD	DD)		FOR SINGLE PRE	PARATION'	TO U	JSER:
<b>1</b> -		rial Review Board Assurance Progra		(D)					· · · · · · · · · · · · · · · · · · ·
QA-020, "Report	. •	•	111			FREQUENCY C	F ISSUE:	PUBLICAT	ION DATE:
		gory A) for Desig	n Ev	ميراه	tion	O ANNUALLY O SEMI-ANNUAL	LY	н	DR
•		•	II L'V	arua	uon	O QUARTERLY O 81-MONTHLY			REQUENCY
SE-058, Drawing	gs (Cate				· · · · · · · · · · · · · · · · · · ·	O MONTHLY SEMI-MONTHL	٧		STONE)
CLASSIFICATION: O SECRET		O GROUP I O GROUP 2	O SPI	ECIAL	HANDLING	O 81-WEEKLY		Not app	licable
☐ CONFIDENTIAL☐ SECRET RESTRICTED D.	ATA	O GROUP 3 O GROUP 4			CREET CREET	O WEEKLY  DAILY		ESTIN EXPIRATI	MATED
O CONFIDENTIAL RESTR  ☐ UNCLASSIFIED				OJECT	DISCREET	A c roquir		EXPIRAL	ON DATE.
M ONCEASSIFIED			O NO	FORN		As require		L	
FORM OF DATA:		O OF DATA:		INIOTE	U.O.T.O.L	Contract N		cification	
O CHART	IN I	O ABSTRACT O BROCHURE		LETTE	UCTION	Contract IV	ASA SPC	ciricatioi	15
DIAGRAM		O BULLETIN		LIST					
O DRAWING		☐ CATALOG		LOG					
☐ FILM (STATIC OR M	IOTION)	O CONTRACT	О	MANU	JAL				
☐ ILLUSTRATION		O DIRECTIVE	О	MEMO	RANDUM				
O MODEL		O DISCLDSURE		MINUT	ΓES	APPLICABLE STAI	IDADDC:	<del></del>	······································
O RECORDING (TAPE	OR DISC)	O ENGINEERING CHANGE	=	PLAN	EDURE	APPLICABLE STAI	NDARDS.		
COMPUTER CARD COMPUTER TAPE		ORDER O REQUEST FOR ENGINE			EDURE LATION				
☐ MICROFILM (W/OR	W/O CARD)	ING CHANGE PROPO						*	
□ OTHER	,	☐ ENGINEERING CHANGE		SCHE					
	<del></del>	PROPOSAL	О	SPECI	IFICATION				
	<del></del>	O HANDBOOK		STANI					
		O INDEX	O	VOUCH	⊣EK				
REVIEWS AND/OR APPROV		RED:			· · · · · · · · · · · · · · · · · · ·	<del></del>			·
(LIST IN ORDER OF SUBMI		DRAFT	D	ATE		PREPUBLICATION	PROOF	ח	ATE
	,		7			. NEI OBLIGATION	11.001	D	
SUBMIT FOR REVIEW TO -									
SUDIVITI FOR REVIEW IU									
		BY	-					ВҮ	
_					<del></del>			<del></del>	<del></del>
, -			•		·	<del></del>	-	4	
-					<del></del>	<u> </u>		<del> </del>	· · ·
SUBMIT FOR		BY	*		<del>-</del> +	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	BY	· · · · · · · · · · · · · · · · · · ·
APPROVAL TO	Janagar				_ , =				
1	nanager	, Quality Assuran				· · · · · · · · · · · · · · · · · · ·			<del></del>

	·	
VOYAGER DATA REQUI	REMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS'	ORD I	
A DRD at the subcontractor/vendor level sin See sample format.	milar in content to this DRD is required.	· ·
	-	
SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY A	AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:		
1. Serialized preprinted form.	avanhan and a aman alatum	
<ol> <li>Description of the hardware by drawing</li> <li>Description of nonconformance and the a</li> <li>Assigning of corrective action to individ</li> </ol>	assignable responsibility.	
5. Disposition recommended:	e. MRB	
b. Return to vendor	E. Accept as is g. Retest	
d. Scrap  6. Approvals required:	z. Retest	
Manufacturing engineering Design engineering		
Quality assurance engineering		

I. NOME	NCLA	TURE			NONC	ONF	ORMAI	ICE I	REPOR	T ON		2. IN	TIAT	ED BY	DATE	
3. DWG	PT/G	RREV	AN			<b>W</b> . 5.	SOURCE	INSF	6. RE	F. REP. N	0. 7. L	0G 1	TEM	8. ENV		
CII#		** · · · · · · · · · · · · · · · · · ·		0.5	.E,			NONE						END	ITEM	
9. SERIA	AL NO.	IO. LOT	DWO	II. T.P.	-S.I.	PAI	R. REV.			PE OF TE	ST	13.1		TIME		
		<u> </u>			··········					inor.		<u></u>	_ H	RI	MIN.	_616.
14. DIS	CREPA	ANCY (IN	N-PRC	DCESS)	(FUN	CTIO	NAL)									
	Failı	are Disc	overed	During	Reas	son fo	r Report	Rep	air or D	isposition	Action	Rej	place	ement		
	1.	Bench T	est		1.	Faile	d Item	1.	Repaire	ed in Place		1.	Ide	ntical Pa	ırt	
1		Inspectio	n				Direct	2.	Rep Re	installed		2.	Sul	bstitute F	t.	
		Storage					Expired		Adjuste			3.		ne Neede		
		Shipping Checkou			4.	Othe	r	4. 5.	Elimina Conden			4.	No	t Availab	le	
i		Maintena						6.	Held fo							
		Mfr. Te						7.	Depot F	Rep.						
į		Operatio Qual	n					8.	Failure	Analysis						
15. INI		DISPO	SITIOI	N												
<b></b>	· · · · · · ·	<del></del>														
If CO	DDEC.	TIVE A	CTION	(TO	WOID	DEC	JRRENC	· 5 \							·	
11. 00	INICE	IIVL A	JION	(10 /	-VOID	NEO.	JNISENC		<del></del>					· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>
			<del>'</del>		· · · · · · · · · · · · · · · · · · ·		<del></del>		· · · · · · · · · · · · · · · · · · ·	<del></del>					<del> </del>	
18. CL	119. R	RECD IN	SP. R	FJ 20.	PC Q	DOE	21. SHIP	NOTI	CF 22	. VEND. \$	HOP/L	OCA	TIO	<b>Y</b>		
	1,0,								,						<b>.</b>	
23. SH	OP OF	RDER NO		24	PRO	D. C.	ONT	DAT	E 25	PURCHA	SING [	DATE	26			AUSE O.
28, AS	REOD	).	DATE	A	DISP.	AUTI	HORITY	DAT	Έ Ο.		DA	TE	7 <b>Q</b>	MRB <i>₩</i>	30. F	A NO.
<b>3</b> 1. AS	REQU	).	DATE	В,				DAT	E E.		DA	ΤE	32.	ARB		DATE
33. AS	REOD	).	DATE	С	<u> </u>			DAT	E F.		DΑ	ΛΤΕ	34.	CONT.	ON PO	э̀.

Nonforming Material Report

VOY.	AGER DATA	REQUIREMENT DESCRIPTION		DRD APPROVED	DATE:	DATA CATEGORY		
ORGANIZATION ORIGINATING REQUIREMENT.	CODE:	OFFICE RESPONSIBLE FOR DRD	: CODE:	DRD PREF	ARED BY: Smyth	DATE: 7/28/67	CONTRACT NO.:	DRD NO.: QA-022
*REPORT, P	<u>. 1</u>	S TRENDS	<u> </u>		ORGANIZATION FOR DOCUMENT Quality A	PREPARATION: SSURANCE RESPONSIBLE	TASK OR SUBTASK: DRL NO.:	DRL ITEN NO.:
		,			FOR DOCUMENT ORGANIZATION	REPRODUCTION:	DDL NO.:	FILE NO
TYPE OF DOCUMENT:					FOR DOCUMENT	DISTRIBUTION;		
USE OF DOCUMENT:	ONTROL	DACTION DREFERENCE X	INFORM	ATION	ORGANIZATION	RESPONSIBLE	NO OF	COPIES
To detect nonconf		e trends at receiving, ly and test to identify			FOR DOCUME	ENT STOWAGE.	1.	5
		ely corrective action			ESTIMATED FOR SINGLE F		_	TON CUTOFF MILESTONE
	turing S	Standing Instructions	•	s)	ESTIMATED FOR SINGLE I	COST (\$) PREPARATION'		ATA DUE USER'
		rial Review Board (M	RB)		FREQUENCY	Y OF ISSUE:	PUBLICAT	TION DATE:
_	•	Assurance Program Informing Material (NO	CMR)		☐ ANNUALLY☐ SEMI-ANNU☐ QUARTERLY☐ BI-MONTHL	′		HDR FREQUENCY
CLASSIFICATION:  SECRET				HANDLING	MONTHLY SEMI-MONT SEMI-WEEKLY WEEKLY		Throug	Γ
☐ CONFIDENTIAL ☐ SECRET RESTRICTED D ☐ CONFIDENTIAL RESTRICTED  MUNCLASSIFIED		GROUP 4 D S	NASA DIS JPL DIS PROJECT NOFORN		O DAILY  OTHERWISH	E,AS SPECIFIED		MATED ION DATE
FORM OF DATA:	KIN	D OF DATA.			REFERENCE DO	OCUMENTS:		
PRINTED DOCUM	ENT		INSTI	RUCTION	NPC	200-2		
□ CHART □ DIAGRAM			L LEIII LIST	EK				
□ DRAWING			□ LOG					
☐ FILM (STATIC OR I	MOTION)	□ CONTRACT [	□ MAN	JAL				
☐ ILLUSTRATION		□ DIRECTIVE	□ MEMC	DRANDUM				
□ MODEL			MINU		APPLICABLE S	2TANDADDS		
☐ RECORDING (TAPE ☐ COMPUTER CARD ☐ COMPUTER TAPE	OR DISC)		□ PLAN □ PROC □ REGL	EDURE	APPLICABLE S	STANDARDS		
☐ MICROFILM (W/OF	W/O CARD)							
OTHER		PROPOSAL (		IFICATION				
			STAN VOUC					
REVIEWS AND/OR APPROV		IIRED:				44,		
(LIST IN ORDER OF SUBM	ITTAL)	DRAFT	DATE		PREPUBLICATION	ON PROOF	С	DATE
SUBMIT FOR REVIEW TO' -				_				
- -		ВУ					ВҮ	
· -				<u> </u>			_	
SUBMIT FOR APPROVAL TO		BY		<u> </u>			вү	
-	Manage	r, Quality Assurance	<del>,</del>	_				

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
The Process Control Engineer performs a daily review of all NCM reports and interfaces with Engineering, Manufacturing Planning and Supervision, Quality Assurance to determine assignables for defects and corrective action. Trend charts are maintained weekly from these determinations.	
E	
SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
<ul><li>OUTLINE OF CONTENTS:</li><li>1. The Nonconforming Material Reports are developed into trend charts for each area of manufacturing, inspection, test and assembly.</li></ul>	
2. Each area is broken down into the major elements of activity, and trend charts are plotted with established control limits (upper and lower).	
3. Responsibility for corrective action on nonconformance is assigned to Manufacturing, Engineering and Quality Assurance and each function is measured by the trend charts.	
4. Trend charts and records are maintained on all operators and inspectors to measure performance and determine needs for additional training.	
5. A summary of corrective action status is made each week to supplement the trend charts	•
•	

V0.	ACED DATA	DECLUDEMENT DESCRIPTION		DRD APPROVED BY	<b>/</b> ;	DATE:	DATA CATEGORY:	
VOYA	. DAIA	REQUIREMENT DESCRIPTION		·				
ORGANIZATION ORIGINATING	CODE:	OFFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	ARED BY:	DATE:	CONTRACT	DRD NO.:
REQUIREMENT.	QA			T.F. S	myth	7/28/67	NO.:	$QA_{\overline{00}}023$
TITLE OF DOCUMENT:				1	ORGANIZATION RE	SPONSIBLE	SUBTASK TASK OR	DRL ITEM
TITLE OF BOOOMENT.					ORGANIZATION REPORTED TO THE PORT OF THE P	HETELERADE N:	SUBTASK	
					OF BANIZATIONS RELIGION DOCUMENT RE	SPONSHOLE	DRL NO.:	LEVEL NO
.*REPOF	RT, QUA	ALITY AUDIT			ORGANIZATION RI	SPONSIBLE	DRL NO.	LEVEL NO.:
					FOR DOCUMENT RE	EPRODUCTION:		
								H
					ORGANIZATION R FOR DOCUMENT O		DDL NO	FILE NO
TYPE OF DOCUMENT: OC	ONTROL	DACTION DREFERENCE	₩ INFOR	MATION				
USE OF DOCUMENT:					ORGANIZATION R FOR WCUMENT		NO <b>OF</b>	COPIES
To measure the	level of	compliance to the	e establ	ished	FOR WCOWENT	STOWAGE.		LO
		rating Procedures			ESTIMATED M	ANHOLIDE		ION CUTOFF
- ·	_	s and to implemen			FOR SINGLE PRE		-	MILESTONE:
action as necess		complemen			1			
<u> </u>	<del></del>				ESTIMATED CO		4	ATA DUE
INTERRELATIONSHIP WITH (					FOR SINGLE PRE	PARATION'	ТО	JSER.
	-	Assurance Progra						<del> </del>
QA-021, Report	t, Nonco	onforming Materia	1 (NCM	IR)	FREQUENCY (	F ISSUE.		ION DATF
					8 ANNUALLY 8 SEMI-ANNUAL	LY	HI	)R
					B PARTERLY			REOUENCY
		The state of the s			☐ MONTHLY	V	Throu	ESTONE) a <b>h'</b>
CLASSIFICATION:		O GROUP I O GROUP 2	O SPECIAL	HANDLING	O SEMI-MONTHL O BI-WEEKLY	<u>.</u> Y		ÄCT
O CONFIDENTIAL O SECRET RESTRICTED D	۸۳۸	O GROUP 3 O GROUP 4	O NASA D	ISCREET	WEEKLY DAILY		ESTI	MATED
☐ CONFIDENTIAL RESTR		O PROPRIETARY	O PROJEC	T DISCREET	OTHERWISE,A	S SPECIFIED	EXPIRATI	ON DATE:
M UNCLASSIFIED		O PUBLIC DOMAIN	O NOFORM	· · · · · · · · · · · · · · · · · · ·	REFERENCE DOCI	IMENITO:	<u> </u>	
FORM OF DATA:		O OF DATA:			REFERENCE DOC	JIVILIV I 3.		
RINTED DOCUME	ENT	O ABSTRACT		RUCTION	NPC 200-2			
O CHART O DIAGRAM		D BROCHURE O BULLETIN	O LET		111 0 200 2			
O DRAWING		O CATALOG	O LOG					
O FILM (STATIC OR N	MOTION)	O CONTRACT	☐ MAN	IUAL				
O ILLUSTRATION		O DIRECTIVE	☐ MEM	IORANDUM				
☐ MODEL		☐ DISCLOSURE	O MINI					
☐ RECORDING (TAPE	OR DISC)	☐ ENGINEERING CHANGE			APPLICABLÉ STA	NDARDS:		
O COMPUTER CARD		ORDER		CEDURE				
O COMPUTER TAPE O MICROFILM (\(\forall V/OR\)	W/O CARD)	REQUEST FOR ENGINEE ING CHANGE PROPOSE						
O OTHER	( ( ( ( ) )	☐ ENGINEERING CHANGE						
		PROPOSAL		CIFICATION				
		☐ HANDBOOK	C STAI	NDARD				
		□ INDEX	O VOU	CHER				
REVIEWS AND/OR APPROV	'ALS REOUI	RED:			1			
(LIST N ORDER OF SUBM	ITTAL)		D.**E		DDEDURE LOATION	DDOOF	-	
	Į	DRAFT	DATE		PREPUBLICATION	PROUF	Ľ	ATE
1								
SUBMIT FOR REVIEW TO: -								
-		ВҮ		_			BY	
-								
-								
-								
SUBMIT FOR -		5;;						
APPROVAL TO		BY					ВҮ	
_	Manage:	<u>r, Quality As</u> surai	nce					

\*Key Informal Data

PAGE I OF 2

CE EXTENS OF \$1.025	
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	
SPECIAL INSTRUCTIONS:	DRD <b>NO.</b> : QA-02{
	QA-020
DELOW)	
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:	
<ol> <li>Name of area or operation, date of audit, audited by</li></ol>	
3. Results of audit and recommendation for correction and/or improvement.	
<b>4.</b> Assign responsibility for correction and/or improvement.	
5. Establish completion dates for correction/improvement.	
6. Reschedule audit period.	

VOY	AGER DATA	REQUIREMENT DESCRIPTION	N			DRD APPROVED E	BY.	DATE.	DATA CATEGORY:
ORGANIZATION ORIGINATING REQUIREMENT.	CODE:	OFFICE RESPONSIBLE FOR	DRD: CO	DE	DRD PREPA	ARED 8Y: Smyth	DATE: <b>7/28/67</b> '	CONTRACT NO.:	DRD NO.: QA-024
TITLE OF DOCUMENT:	A L L'ESZ	O'T A TUIC	<u> </u>	i.	· . · · · · · · · · · · · · · · · · · ·	ORGANIZATION FOR DOCUMENT Quality Ass	PREPARATION:	TASK OR SUBTASK:	DRL ITEM NO.:
*REPORT; QU	ALIIY	STATUS			:	ORGANIZATION F	RESPONSIBLE	DRL NO.:	LEVEL NO.:
TYPE OF DOCUMENT:	ONTROL	DACTION DREFERENCE	∕ <b>∑</b> INFO	ORMA	ATIOÑ	ORGANIZATION F FOR DOCUMENT I		DDL NO.;	FILE NO.:
USE OF DOCUMENT:	OITINOL	DAOTION CINETENENCE	A INI	OTTIMA		ORGANIZATION I	RESPONSIBLE	NO OF	COPIES'
To compile and		to the customer f				FOR WCUMEN		10	
quality require control docume		s supported by the	e vario	ous		ESTIMATED I FOR SINGLE PR			TON CUTOFF MILESTONE
_		REQUIREMENTS: arterly Written		<u> </u>		ESTIMATED ( FOR SINGLE PR			ATA DUE USER
PC-002, Rep	ort, Co	ntract Status				FREQUENCY	OF ISSUE:	PUBLICAT	TION DATE.
Pro	ocedure			ing		☐ ANNUALLY ☐ SEMI-ANNUA ☐ QUARTERLY	LLY	SDI	R
QA-009, Plan	ı, Qualı	ty Assurance Pro				☐ EI-MONTHLY ☐ SEMI-MONTH O B{-WEEKLY	ILY	OR MIL	FREQUENCY ESTONE) h launch
☐ SECRET ☐ CONFIDENTIAL ☐ SECRET RESTRICTED D ☐ CONFIDENTIAL RESTR  15 UNCLASSIFIED		GROUP 2 GROUP 3 GROUP 4 PROPRIETARY PUBLIC DOMAIN	□ NASA □ JPL	DIS DIS( JECT		☐ WEEKLY ☐ DAILY	AS SPECIFIED	ESTII	MATED ION DATE'
FORM OF DATA:	KINI	O OF DATA:				REFERENCE DOO	CUMENTS:		
R PRINTED DOCUME		□ ABSTRACT	□ IN	NSTR	UCTION		_		
CHART		☐ BROCHURE		ETTE	R	NPC 200-	-2		
□ DIAGRAM		□ BULLETIN	<b>0</b> LI	IST					
☐ DRAWING		☐ CATALOG	<u>п</u> го						
☐ FILM (STATIC OR N	MOTION)	□ CONTRACT	ΩМ						
O ILLUSTRATION O MODEL		☐ DIRECTIVE ☐ DISCLOSURE			RANDUM FS				
RECORDING (TAPE	OR DISC)	☐ ENGINEERING CHANGE			LO	APPLICABLE ST.	ANDARDS.		
COMPUTER CARD		ORDER	□ PI	ROCE	EDURE				
COMPUTER TAPE		REQUEST FOR ENGINE	ER- 🗖 R	EGUI	LATION				
O MICROFILM (W/OR	W/O CARD)	ING CHANGE PROPO	-						
OTHER		ENGINEERING CHANGE PROPOSAL			FICATION				
		☐ HANDBOOK			DARD				
		□ INDEX		OUCH	HER				
REVIEWS AND/OR APPROV (LIST IN ORDER OF SUBM	ITTAL)	RED:	DAT	TE		PREPUBLICATION	N PROOF		DATE
SUBMIT FOR REVIEW TO: -									
-									
_		BY						BY	
-									
_									
SUBMIT FOR -									
APPROVAL TO _		BY						BY	
]	Manage	<u>r, Quality As</u> sura	n <u>ce</u>						

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET
SPECIAL INSTRUCTIONS:  DRO NO.:  QA-024
<u></u>
NECOMA DISTRIBUTION (IS DISTRIBUTION IS NOT COVERED BY AN EXISTING DRIVENING BY WOLFE IN DISTRIBUTION DELOWS
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)
i e e e e e e e e e e e e e e e e e e e
OUTLINE OF CONTENTS:
1. General narrative comment on the conformance of meeting the quality levels of the
<ul><li>Voyager Program.</li><li>2. Summarized pictorial illustrations, graphs of the various measurements of the quality performance such as:</li></ul>
a. MRB activity b. NCMR activity
c. Corrective actions d. Tests
e. Audits
With supplemental narrations on the progress in each area of activity.  3. Conclusions on the overall quality performance.

JPL 2568-1 OCT 65

DATE DATA DRD APPROVED BY CATEGORY VOYAGER DATA REQUIREMENT DESCRIPTION ORGANIZATION ORIGINATING REOUIREMENT DRD NO.: DRD PREPARED BY: CONTRACT CODE: OFFICE RESPONSIBLE FOR DRD CODE DATE 7/28/67 OA-022 DRL ITEM ORGANIZATION RESPONSIBLE TASK OR SUBTASK TITLE OF DOCUMENT FOR DOCUMENT PREPARATION: NO.: Quality Assurance/Test REPORT, SPECIAL MEASUREMENT AND LEVEL NO. ORGANIZATION RESPONSIBLE DRL NO. TEST EQUIPMENT EVALUATION (COMPONENT) FOR DOCUMENT REPRODUCTION FILE NO. ORGANIZATION RESPONSIBLE DDL NO. FOR DOCUMENT DISTRIBUTION. TYPE OF DOCUMENT: DACTION CONTROL DREFERENCE DINFORMATION ORGANIZATION RESPONSIBLE USE OF DOCUMENT: NO OF COPIES. When analysis of the quality levels indicate a shift in FOR WCUMENT STOWAGE performance or accuracy, a special measurement and 10 INFORMATION CUTOFF ESTIMATED MANHOURS test equipment evaluation capability study is performed FDR SINGLE PREPARATION DATE OR MILESTONE: to verify the integrity and confidence in the test results, DATE DATA DUE ESTIMATED COST(\$) INTERRELATIONSHIP WITH OTHER DATA REQUIREMENTS: FOR SINGLE PREPARATION TO USER. QA-009, Plan, Quality Assurance Program QA-031, Specification, Special Test Equipment PUBLICATION DATE FREQUENCY OF ISSUE: (STE) Component ANNUALLY SEMI-ANNUALLY QUARTERLY SDR Plan, Integrated Test TE-001. UPDATE (FREQUENCY Procedure, Test Operating TE-030, MONTHLY SEMI-MONTHLY OR MILESTONE): ☐ GROUP I GROUP 2 CLASSIFICATION: BI-WEEKLY ☐ SPECIAL HANDLING □ SECRET WEEKLY GROUP 3 □ NASA DISCREET
□ JPL DISCREET ESTIMATED CONFIDENTIAL DAILY SECRET RESTRICTED DATA EXPIRATION DATE TO OTHERWISE, AS SPECIFIED ☐ PROPRIETARY CONFIDENTIAL RESTRICTED DATA □ PROJECT DISCREET **▼** UNCLASSIFIED ☐ PUBLIC DOMAIN □ NOFORN <u>One time</u> REFERENCE DOCUMENTS: KIND OF DATA: FORM OF DATA: □ INSTRUCTION EX PRINTED DOCUMENT ABSTRACT □ BROCHURE □ LETTER NPC 200-2 CHART □ BULLETIN ☐ LIST □ DIAGRAM □ DRAWING ☐ CATALOG ☐ FILM (STATIC OR MOTION) □ CONTRACT ☐ MANUAL ☐ ILLUSTRATION ☐ DIRECTIVE ☐ MEMORANDUM ☐ DISCLOSURE □ MINUTES □ MODEL APPLICABLE STANDARDS. ☐ PLAN ☐ RECORDING (TAPE OR DISC) ☐ ENGINEERING CHANGE ☐ COMPUTER CARD ORDER ☐ PROCEDURE □ COMPUTER TAPE ☐ REQUEST FOR ENGINEER-☐ REGULATION ☐ MICROFILM (W/OR W/O CARD) ING CHANGE PROPOSAL X REPORT ☐ ENGINEERING CHANGE ☐ SCHEDULE PROPOSAL ☐ SPECIFICATION ☐ HANDBOOK C STANDARD O INDEX □ VOUCHER REVIEWS AND/OR APPROVALS REQUIRED: (LIST IN ORDER OF SUBMITTAL) DRAFT DATE PREPUBLICATION PROOF DATE SUBMIT FOR REVIEW TO' SUBMIT FOR APPROVAL TO Manager, Qudlity Assurance

VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET
SPECIAL INSTRUCTIONS:  QA-02
Quality Assurance Engineer witnesses the special measurement and test equipment evaluation.
SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING ODL WRITE IN DISTRIBUTION BELOW)
,
OUTLINE OF CONTENTS:
<ol> <li>Procedure for the verification that the equipment is compatible with desired resolution of measurement parameters.</li> <li>Defines data requirements of the special test.</li> </ol>
(CONTINUE ON THIRD SHEET IE NECESSARY AND AFEIX TO THIS DRD.)

**-**2-

VO,	YAGER DATA	REQUIREMENT DESCRIPTION			DRD APPROVED B	Y:	DATE:	DATA CATEGORY:
ORGANIZATION ORIGINATING	CODE:	OFFICE RESPONSIBLE FOR	DRD: COD	E DRD PREP	ARED BY.	DATE:	CONTRACT	DRD NO.:
REQUIREMENT	QA			T.F. S		7/28/67	NO.:	QA-026
REPORT, Q	UALITY	ASSURANCE	1 472		(HGANIZATION R FOR DOCUMEN F Quality Ass	PREPARATION	TASK OR SUBTASK:	DRL ITEM NO.:
AUDIT SUM					(IRGANIZATION R FOR DOCUMENT R		DRL NO.:	LEVEL NO.:
					ORGANIZATION FOR DOCUMENT D	ISTRIBUTION:	DDL NO.:	FILE NO.:
	CONTROL	DACTION DREFERENCE	An INFO	RMATION				_
USE OF DOCUMENT					ORGANIZATION R FOR DOCUMENT		NO OF	COPIES
1		ompliance to the				· · · · · · · · · · · · · · · · · · ·	10	
-	•	the systems contraction and testing			ESTIMATED N FOR SINGLE PRI			TION CUTOFF MILESTONE:
INTERRELATIONSHIP WITH		REQUIREMENTS: SSURANCE Program			ESTIMATED C FOR SINGLE PR	OST (\$) EPARATION:		ATA DUE JSER:
QA-023, Report,	Quality	Audit			FREQUENCY (	OF ISSUE:	PUBLICAT	TION DATE:
QA-027, Report,	Quality	Assurance Trend	Summ	nary	O ANNUALLY SEMI-ANNUAL QUARTERLY EI-MONTHLY	LLY	HD LUPDATE (F	OR EREQUENCY,
CLASSIFICATION:		O GROUP I		AL HANDLING	MONTHLY SEMI-MONTHI EI-WEEKLY WEEKLY	LY	Thru la	
☐ CONFIDENTIAL ☐ SECRET RESTRICTED O CONFIDENTIAL REST MUNCLASSIFIED		O GROUP 3  GROUP 4  O PROPRIETARY  O PUBLIC DOMAIN	□ JPL I	DISCREET DISCREET CT DISCREET RN	DAILY DAILY OTHERWISE, A	s specified	1	MATED ON DATE:
FORM OF DATA:		O OF DATA.	•		REFERENCE DOC	UMENTS:		
PRINTED DOCUM	IENT	☐ ABSTRACT ☐ BROCHURE		STRUCTION	NPC 2	00-2		
☐ CHART ☐ DIAGRAM		☐ BULLETIN	D LE		l mc2	00-2		
DRAWING		☐ CATALOG	□ LO	3				
[] FILM (STATIC OR	MOTION)	O CONTRACT		NUAL				
I ILLUSTRATION		☐ DIRECTIVE		MORANDUM				
☐ MODEL ☐ RECORDING (TAP	F OR DISC)	☐ DISCLOSURE ☐ ENGINEERING CHANGE		NUTES An	APPLICABLE STA	NDARDS.		
COMPUTER CARE	•	ORDER		OCEDURE				
C) COMPUTER TAPE		REQUEST FOR ENGINEE						
☐ MICROFILM (₩/O	R WO CARD)	ING CHANGE PROPOS  O ENGINEERING CHANGE		HEDULE				
		PROPOSAL		ECIFICATION				
		☐ HANDBOOK O INDEX		ANDARD UCHER				
REVIEWS AND/OR APPRO (LIST IN ORDER <b>OF</b> SUBM	IITTAL)	RED:	DATE	<del></del>	PREPUBLICATION	PROOF	D	ATE
SUBMIT FOR REVIEW TO:							<del>-</del>	
		BY					BY	
				-				
1								
SUBMIT FOR APPROVAL TO		ВУ					BY	
	Manager	<u>, Quality As</u> suran	ce					

DUTLINE OF CONTENTS:  L. Summary of biweekly audits listing.  2. Name of area and/or operation (date of audits).  3. Findings, corrective action, completion attes and open corrective actions with promise dates of completion.  4. Overall rating for area audited and an indication of trends.		*
DUTLINE OF CONTENTS:  L. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.	VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	:
Submitted quarterly to Spacecraft System Office.  Dutline of contents:  1. Summary of biweekly audits listing.  2. Name of area and/or operation (date of audits).  3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion.  4. Overall rating for area audited and an indication of trends.  5. Analysis, conclusions and recommendations.	SPECIAL INSTRUCTIONS:	
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.	<u> ૄિય</u>	11-020
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
Submitted quarterly to Spacecraft System Office.  DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.	SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)	
DUTLINE OF CONTENTS:  1. Summary of biweekly audits listing. 2. Name of area and/or operation (date of audits). 3. Findings, corrective action, completion dates and open corrective actions with promise dates of completion. 4. Overall rating for area audited and an indication of trends. 5. Analysis, conclusions and recommendations.		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>	Submitted quarterly to Spacecraft System Office.	
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Summary of biweekly audits listing.</li> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>		
<ol> <li>Name of area and/or operation (date of audits).</li> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ol>	OUTLINE OF CONTENTS:	
<ul> <li>Findings, corrective action, completion dates and open corrective actions with promise dates of completion.</li> <li>Overall rating for area audited and an indication of trends.</li> <li>Analysis, conclusions and recommendations.</li> </ul>		
with promise dates of completion.  Overall rating for area audited and an indication of trends.  Analysis, conclusions and recommendations.		
5. Analysis, conclusions and recommendations.	with promise dates of completion.	
The summary extends to all areas of fabrication, assembly, inspection and test.		
	The summary extends to all areas of fabrication, assembly, inspection and test.	

VC	DYAGER DATA I	REQUIREMENT DESCRIPTION		DRD APPROVED	BY:	DATE	DATA CATEGORY
ORGANIZATION ORIGINATING	G CODE:	OFFICE RESPONSIBLE FOR DRO	CODE DRD PREPARENT		DATE' 7/28/67	CONTRACT NO.	DRD NO. QA-027
TITLE OF DOCUMENT:		IRANCE	1,1.5	ORGANIZATION FOR DOCUMENT Quality A	RESPONSIBLE PREPARATION'	TASK OR SUBTASK:	DRL ITE NO.:
TREND SUMMA		OKAIVEL		ORGANITATION FOR MT	RESPONSIBLE REPRODUCTION.	DRL NO.	
TYPE OF DOCUMENT				FOR TOTAL	RESPONSIBLE	DDL NO.:	FILE NO.
	CONTROL	DACTION DREFERENCE &	1 INFORMATION				
USE OF DOCUMENT:  Summarize and a	analyze a	ll trend reports to d	etermine the	FOR DOCUME		NO. OF	COPIES:
	-	cation, assembly, in	and the second s		·		
	ance and	to determine need f	-	ESTIMATED FOR SINGLE P		INFORMAT DATE OR I	
INTERRELATIONSHIP WITH OA-007 - Minute		REQUIREMENTS: al Review Board (M)	R B)	ESTIMATED FOR SINGLE P			ATA DUE JSER'
QA-009, Plan, (	Quality As	ssurance Program	·	FREQUENCY	OF ISSUE	PUBLICAT	ION DATE
QA-021, Report, QA-022, *Report		forming Material (No ss Trends	CMR)	O SEMI-ANNU  QUARTERLY			DR
	·			O MONTHLY			ESTONE)
CLASSIFICATION:		☐ GROUP I ☐ GROUP 2 O	SPECIAL HANDLING	SEMI-MONT O 81-WEEKLY	HLY	Thru la	unch
ONFIDENTIAL O SECRET RESTRICTED CONFIDENTIAL RES		☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY O	NASA DISCREET JPL DISCREET PROJECT DISCREET NOFDRN	☐ WEEKLY ☐ DAILY ☐ OTHERWISE	, AS SPECIFIED		MATED ON DATE:
FORM OF DATA:	KINE	O OF DATA:		REFERENCE DO	OCUMENTS:		
PRINTED DOCU	MENT		☐ INSTRUCTION				
O CHART			☐ LETTER O LIST	NPC 200	-2		
O DIAGRAM  DRAWING		_ 502221111	□ LOG				
☐ FILM (STATIC OF	R MOTION)	_ : : : : : : : : : : : : : : : : : : :	☐ MANUAL				
O ILLUSTRATION	*	O DIRECTIVE	☐ MEMORANDUM .				
☐ MODEL		☐ DISCLOSURE	☐ MINUTES				
☐ RECORDING (TAI ☐ COMPUTER CAR ☐ COMPUTER TAP	D		O PROCEDURE	APPLICABLE S	TANDARDS.		
O MICROFILM (\\/)		ING CHANGE PROPOSAL					
O OTHER			SCHEDULE SPECIFICATION				
			O STANDARD				
			□ VOUCHER				
REVIEWS AND/OR APPRO (LIST IN ORDER <b>OF</b> SUB	BMITTAL)	RED: DRAFT	DATE	PREPUBLICATIO	N PROOF	D	ATE
SUBMIT FOR REVIEW TO		<del></del>				<del></del>	<del></del>
		BY				ВҮ	
							·
		<u> </u>	<del></del>			<del></del>	
SUBMIT FOR		BY	<del></del>	,		BY	
APPROVAL TO		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		D I	<del></del>
I	<u>Manager,</u>	Quality Assurance_	. <u>-</u>			<del></del>	<del></del>

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

#### SPECIAL INSTRUCTIONS:

The weekly quality trends are plotted on control charts; process averages are calculate and control limits established. Each specific area of performance, electronic shops, machine shops, sheet metal shop, assembly and test areas is plotted to indicate trends to control quality of the outgoing hardware. A summary analysis for each area is submitted to assign responsibility for control.

QA-C-7

SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

#### OUTLINE OF CONTENTS:

- 1. Report summarizes the process parameters within a given area that are measured for performance trends.
  - a. Mechanical machine shop
  - b. Mechanical sheet metal shop.

Typical control parameters in these areas are, dimensional surface finish, welding concentricity, procedure. Defects are assigned responsibility by shop planning, engineering, inspection planning.

- 2. Electronic shops are controlled in the following areas:
  - a. Module or printed circuits
  - b. Black box assembly
  - c. Test

Typical control parameters in these areas are: accumulations, assembly and orientation, soldering, welding, procedural and handling and defects are assigned responsibility.

,	DYAGER DATA P	EQUIREMENT DESCRIPTION	V	,	DRD APPROVED BY	,	DATE	DATA CATEGORI.
VC	CINCEN DAIA R	ESCINEWENT DESCRIPTION		<u></u>				
ORGANIZATION ORIGINATIN REOUIREMENT	G CODE C	FFICE RESPONSIBLE FOR	DRD: CODE	DRD PREPA	ARED BY:	DATE	CONTRACT NO.'	DRD NO.
	CM	de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la		T. F. S	myth	7/28/67		QA-028
TITLE OF DOCUMENT:					DRGANIZATION REFOR D CUMENT P		TASK OR SUBTASK	DRL ITEM NO
					<b>Oua</b> fity		CODIAGN	110
   DEDODE D	DEAU OF	INICDECTION			DRGANIZATION RE	rance	DRL NO	LEVEL NO:
KEPUKI, B	KEAK UF	INSPECTION	ė		FOR DOCUMENT RE			
					<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>			
	<del></del>	,			ORGANIZATION REFOR DOCUMENT DI		DDL NO.	FILE NO.
TYPE OF DOCUMENT	CONTROL E	ACTION DREFERENCE	X INFOR	MATION				
USE OF DOCUMENT					ORGANIZATION RE		NO. OF	COPIES:
		hardware affect			FOR DOCUMENT	STOWAGE.	1	15
	_	event delaying as		_	ESTIMATED MA	ANHOURS		ION CUTOFF
and test sche	eaules of th	ne overall progra	m.		FOR SINGLE PRE			MILESTONE:
							,	
INTERRELATIONSHIP WITH	I OTHER DATA	REOUIREMENTS:		· · · · · · · · · · · · · · · · · · ·	ESTIMATED CO FOR SINGLE PRE	ST (\$) PARATION:		ATA DUE USER:
CM-019, I	List, Brea	k of Inspection po	er Cont	ract				
1	End Item	· -			FREQUENCY O	F ISSUE:	PUBLICAT	ION DATE:
1		figuration Manage			☐ ANNUALLY		HDF	•
		ity Assurance Pr	•		SEMI-ANNUAL QUARTERLY 81-MONTHLY	LY		
	keport, Br	eak of Inspection	l 		O MONTHLY	v	OR MILI	REQUENCY STONE):
CLASS IFICATION:  □ SECRET		☐ GROUP I ☐ GROUP 2	O SPECIA	L HANDLING	O SEMI-MONTHL  B 81-WEEKLY	Υ	Thru La	unch
O CONFIDENTIAL  SECRET RESTRICTED	D DATA	O GROUP 3	□ NASA D	ISCREET	O DAILY		ESTIN	MATED
O CONFIDENTIAL RES		O PROPRIETARY O PUBLIC DOMAIN		T DISCREET	OTHERWISE, AS	S SPECIFIED	EXPIRALI	ON DATE:
FORM OF DATA:	KIND	OF DATA.			REFERENCE DOCU	IMENTS:	<del>L </del>	
PRINTED DOCU		☐ ABSTRACT	□ INST	RUCTION	Configurati	on Mana	gement 1	Manual
☐ CHART		□ BROCHURE	C LETT		CM 001BB			
O DIAGRAM		D BULLETIN	aX ∟ıs⊤			- L		
☐ DRAWING ☐ FILM (STATIC OF	R MOTION)	☐ CATALOG ☐ CONTRACT	□ LOG □ MAN	IUAL	:			
O ILLUSTRATION		☐ DIRECTIVE	_	ORANDUM				
☐ MODEL		□ DISCLOSURE	□ MINU					· · · · · · · · · · · · · · · · · · ·
☐ RECORDING (TA		□ ENGINEERING CHANGE			APPLICABLE STAI	NDARDS.		
☐ COMPUTER CAR☐ COMPUTER TAP		ORDER  O REQUEST FOR ENGINE		CEDURE UI ATION				
☐ MICROFILM (₩/		ING CHANGE PROPO						
O OTHER	•	☐ ENGINEERING CHANGE	_ sch	EDULE				
<del>,</del>	· · · · · · · · · · · · · · · · · · ·	PROPOSAL		CIFICATION	:		,	
		☐ HANDBOOK ☐ INDEX	□ STAI					
		W INDEX		· ILIX .				. , , , ,
REVIEWS AND/OR APPR (LIST IN ORDER OF SUB		ED:						
(2.0 51.521. 51 505		RAFT	DATE		PREPUBLICATION	PROOF	D	ATE
l								
SUBMIT FOR REVIEW TO'								
Ì							ВҮ —	
ļ								
SUBMIT FOR								
APPROVAL TO		BY					BY	
	Manager.	Quality Assuran	i <u>ce</u>					

PAGE | OF 3

JPL 2568 OCT 65

#### VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET

#### SPECIAL INSTRUCTIONS'

DRD **NO**.

QA-02{

In-Process Inspection makes out a Break of Inspection card with a copy to Quality Assurance Data Collection Center.

A DRD at the subcontractor/vendor level similar in content to this DRD is required.

SPECIAL OISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)

### OUTLINE OF CONTENTS:

- 1. Summary of the Break of Inspection cards and their status.
- 2. Contains the action taken on specific hardware affected by the break of inspection.
- 3. Shows status of parts and substitutions by serial number of the affected parts.
- 4. Shows hardware status awaiting Break of Inspection action.
- **5.** Lists hardware requiring Material Review Board action as direct result of the Break of Inspection event.
- **6.** Identifies the reinspection required to progress hardware to next level of assembly or test.

See attached form.

GENERAL ELECTRIC
MISSILE AND SPACE DIVISION
VOYAGER SPACECRAFT SYSTEM DEPARTMENT

QUALITY ASSURANCE	BREAK OF INSPECTION REPORT	
SILE AND SPACE DIVISION	ACECRAFT SYSTEM DEPARTMENT	

				KHIB		 		 		
	NEXT BOI					:	-		-	
	TIME STAMP									
EU										
KEINS I ALLEU	NO. DATE									,
S KEIN	IL NO.									
PAHIS	SERIAL			-			<u> </u>			<u> </u>
	, AN				,					
	, REV						•			
	DWG NO.									
	MCMR									
	RETRO							 :		
	NOMECL 4 ORE									
	TIME									
	DATE							 •		
6	RES									
PARTS REMOVED	REV AN		:							
PARTS	SERIAL NO.	:								
	DWG NO.									
	<b>∑</b>									

VOYAGER Quality Assurance Break of Inspection Report

V	WACER DATA	DECLUDEMENT DESCRIPTIO	N		DRD APPROVED B	Υ	DATE:	CATEGORY'
J vc	MAGER DATA	REQUIREMENT DESCRIPTIO	IN					
ORGANIZATION ORIGINATING	G CODE.	OFFICE RESPONSIBLE FOR	DRD: CO	DE DRD PREP	ARĒD BY.	DATE.	CONTRACT	DRD NO.:
REQUIREMENT	QA			T. F. 8	<b>Sn</b> avth	7/28/67	NO.	QA-029
TITLE OF DOCUMENT'	1 2 1				(IRGANIZATION R	ESPONSIBLE	TASK OR	DRL ITEN
					FOR DOCUMENT F		SUBTASK:	NO.:
*REPORT FAII	LURE CA	TEGORIZATION			Assu	rance		
itali otti, iiii	Lette er	1200142111011			ORGANIZATION R		DRL NO.:	LEVEL NO.
•								
		,			ORGANIZATION R	ESPONSIBLE	DDL NO.:	FILE NO.
7/05 05 00 00 00 00 00				·	FOR DOCUMENT D	DISTRIBUTION;		
	CONTROL	DACTION DREFERENCE	<b>M</b> INFO	ORMATION				
use of document' Computerize and	d categori	zation of, and as	signin	g respon-	ORGANIZATION R FOR DOCUMENT		NO OF	COPIES.
_	_	regard to: (1)cla	_		;		10	
(2) environmenta	al test du	ring which failure	e occu:	rred; (3)	ESTIMATED M	MANHOURS		ION CUTOFF
test levels at in	stant of fa	nilure; (4) descri	ption o	of failure:	FOR SINGLE PR	EPARATION	DATE OR	MILESTONE
(5) transducers	(if any) re	ecords at time of	failur	e.				
INTERRELATIONSHIP WITH	OTHER DATA	REQUIREMENTS:			FOR SINGLE PR		•	ATA DU <b>E</b> JSER:
QA-009, Plan,	Quality	Assurance Progr	am					
QA-020 *Repo		•			FREQUENCY	OF ISSUE'	PUBLICAT	ION DATE.
		onforming Materia	al (NC	MR)	☐ ANNUALLY		1	Б
RA-009, Plan,	Reliabil	ity Program			☐ SEMI-ANNUA ☐ QUARTERLY	LLY	HD	
,					© 81-MONTHLY		OD MILÎ	FREQUENCY ESTONE)
CLASSIFICATION:		☐ GROUP I ☐ GROUP 2	O SPEC	CIAL HANDLING	SEMI-MONTHI	LY	Thru lau	nch
CONFIDENTIAL     SECRET RESTRICTED	DATA	GROUP 3 GROUP 4	□ NASA	DISCREET	☐ WEEKLY ☐ DAILY		ESTI	//ATED
☐ CONFIDENTIAL REST		PROPRIETARY	□ PROJ	ECT DISCREET	OTHERWISE, A	\$ SPECIFIED	EXPIRATI	ON DATE
STUNCLASSIFIED		D PUBLIC DOMAIN	□ NOFC	JKN	DEFEDENCE DOC	LIMENTO		
FORM OF DATA:		OF DATA.	~	IOTOLIOTION	REFERENCE DOC	UNIENTS.		
O PRINTED DOCUI	VIENI	☐ ABSTRACT☐ BROCHURE		ISTRUCTION ETTER				
□ DIAGRAM		☐ BULLETIN	□ LI					
DRAWING		O CATALOG	🗖 Ц	OG .				
☐ FILM (STATIC OR	R MOTION)	CONTRACT		ANUAL				
☐ ILLUSTRATION ☐ MODEL		☐ DIRECTIVE ☐ DISCLOSURE		EMORANDUM INUTES				
☐ RECORDING (TAF	PE OR DISC)	☐ ENGINEERING CHANG			APPLICABLE STA	NDARDS		
COMPUTER CAR	•	ORDER		ROCEDURE				
COMPUTER TAP		REQUEST FOR ENGINE						
☐ MICROFILM (₩/(	R W/O CARD)	ING CHANGE PROPO						
OTHER		PROPOSAL		CHEDULE PECIFICATION				
		☐ HANDBOOK		TANDARD				
		O INDEX		DUCHER				
DEVIEWS AND/OD ADDO		DED:						
REVIEWS AND/OR APPRO (LIST IN ORDER OF SUB		NED.						
	[	DRAFT	DAT	E	PREPUBLICATION	PROOF	D	ATE
SUBMIT FOR REVIEW TO'		_		<del>-</del>				
		ВҮ					BY —	
Ī				<del></del> -				
SUBMIT FOR		ВУ					ВҮ ——	
APPROVAL TO	Monogor		noo					
1	ıvıanager	<u>, Quality As</u> sura	псе					

SPECIAL INSTRUCTIONS.	DRD NO. QA-025
SPECIAL DISTRIBUTION. (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN OISTRIBUTION BELOW)	
OUTLINE OF CONTENTS:	
Computer cards bear information regarding:  1. Failure report number	
Computer cards bear information regarding:  1. Failure report number  2. Equipment identification/name  3. Equipment categories	
Computer cards bear information regarding:  1. Failure report number  2. Equipment identification/name  3. Equipment categories  a. Subsystem  b. Class of equipment	
Computer cards bear information regarding:  1. Failure report number  2. Equipment identification/name  3. Equipment categories  a. Subsystem  b. Class of equipment  4. Environmental test during which failure occurred  5. Test level at the instant of failure	
Computer cards bear information regarding:  1. Failure report number  2. Equipment identification/name  3. Equipment categories a. Subsystem b. Class of equipment 4. Environmental test during which failure occurred	

VOYAGER DATA REQUIREMENT DESCRIPTION				DRD APPROVED BY:		DATE:	DATA CATEGORY:	
ORGANIZATION ORIGINATING REQUIREMENT.	1	OFFICE RESPONSIBLE FOR	DRD: CO	1		DATE	CONTRACT NO.:	DRD NO.:
REQUIREMENT.	QA			J.R.	Gottshall	7/28/67		QA-030
TITLE OF DOCUMENT'  REPORT, QUALIFICATION STATUS			organization ri for document p Quality Assu	DEDV D V TIVIL	TASK OR	DRL ITEM		
121 0111, Q01 221 1011 1011 1011				ORGANIZATION R FOR DOCUMENT RI		DRL NO.:	LEVEL NO.:	
*					ORGANIZATION R FOR DOCUMENT D		DDL NO.:	FILE NO.:
TYPE OF DOCUMENT:	CONTROL	DACTION DREFERENCE	O INF	ORMATION				
USE OF DOCUMENT.		wasan in Santana		<del></del>	ORGANIZATION R		NO. OF	COPIES:
To report to the	custom	er the status of the	Туре	e	FOR DOCUMENT	STOWAGE.	10	
Approval Progra	am.			-	ESTIMATED N	IANHOLIRS	10	TION CUTOFF
					FOR SINGLE PRI			MILESTONE:
	Bidder	A REOUIREMENTS:	erating	0	ESTIMATED C FOR SINGLE PRI			ATA DUE USER:
	edures	nty rissurance Opt	zi atilit	5	FREQUENCY (	OF ISSUE.	PUBLICAT	TION DATE:
QA-009, Plan,	Quality	Assurance Progra ity Status	am		O ANNUALLY SEMI-ANNUAL QUARTERLY	LLY		PDR
_	rt, Test				BI-MONTHLY  MONTHLY	V		ESTONE).
CLASSIFICATION: O SECRET		☐ GROUP I O GROUP 2	□ SPEC	CIAL HANDLING	SEMI-MONTHI	_Y	Thru lau	ınch
☐ CONFIDENTIAL ☐ SECRET RESTRICTED ☐ CONFIDENTIAL RES'  ■ UNCLASSIFIED		☐ GROUP 3 ☐ GROUP 4	O NASA	A DISCREET DISCREET JECT DISCREET	D WEEKLY DAILY OTHERWISE, AS SPECIFIED		ESTIMATED EXPIRATION DATE	
FORM OF DATA:	KIN	D OF DATA.			REFERENCE DOC	UMENTS:		
printed docui	MENT	O ABSTRACT		NSTRUCTION				
O CHART		□ BROCHURE		ETTER	NPC-200	)–2		
☐ DIAGRAM ☐ DRAWING		D BULLETIN						
☐ FILM (STATIC OF	R MOTION)	☐ CATALOG O CONTRACT	O LO	ANUAL				
☐ ILLUSTRATION		O DIRECTIVE		EMORANDUM				
□ MODEL		☐ DISCLOSURE	□м	IINUTES				
☐ RECORDING (TAI	PE OR DISC)	☐ ENGINEERING CHANGE	D P	! AN	APPLICABLE STA	NDARDS		
O COMPUTER CAR		ORDER		ROCEDURE				
COMPUTER TAP		O REQUEST FOR ENGINE ING CHANGE PROPORTIONS						
☐ MICROFILM (₩/0	JR W/O CARD)	O ENGINEERING CHANGE		CHEDULE			ı	
		PROPOSAL		PECIFICATION				
		O HANDBOOK	O S	TANDARD				
		☐ INDEX	□ V	OUCHER				
REVIEWS AND/OR APPRO								
ļ		DRAFT	DAT	E	PREPUBLICATION	PROOF	C	DATE
SUBMIT FOR REVIEW TO:								
SUBIVITI FOR REVIEW TO.		_						
		ВҮ					ВҮ	
•								
								<del></del>
SUBMIT FOR		ВУ		-			BY	
APPROVAL TO								
	Manager	r <u>. Quality Ass</u> uran	ce	-				

GE EXHIBIT DRD QA-030					
VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET	24				
SPECIAL INSTRUCTIONS:	DRD NO.				
Submitted to the customer initially then monthly as part of Quality Status Report.	CELL VO				
SPECIAL DISTRIBUTION: (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW)					

### OUTLINE OF CONTENTS:

- 1. Matrix consisting of:
  - a. End item list to be qualified
  - b. Dates for
    - (1) Hardware availability
    - (2) Test facilities availability
    - (3) Test procedure availability
    - (4) Environmental tests
- 2. Narrative of:
  - a. Completed tests
  - **b.** Significant events
    - (1) Milestones
    - (2) Problems/solutions
  - c. Expenditures act/planned

VOYAGER DATA REQUIREMENT DESCRIPTION			DRD APPROVED BY		DATE	DATA CATEGORY.					
ORGANIZATION ORIGINATING REQUIREMENT	CODE	OFFICE RESPONSIBLE FOR	R DRD (	CODE.	DRD	PREPA	ARED BY	DATE:	CONTRACT NO	DRD NO.	
VEXCUITEMENT	QA				<b>J</b> . 1	R. G	ottshall	7/28/67		QA-031	
SPECIFICATION, S	PECL	AL TEST EQUIPM	MEN'	T			organization re for document p 'Quality Ass		TASK OR SUBTASK	DRL ITEM NO	
(STE), COMPONENT			ORGANIZATION RI FOR DOCUMENT RE	ESPONSIBLE	DRL NO	LEVEL NO					
			ORGANIZATION RI		DDL NO	FILE NO					
TYPE OF DOCUMENT TO CONT	ROL I	DACTION DREFERENCE	010	NFORM	ATION						
USE OF DOCUMENT							ORGANIZATION R		NO OF	COPIES	
To definitize the co	mpone	ent special test		_			FOR DOCUMENT	STOWAGE	10		
equipment design an	_	-		_			ESTIMATED M	ANHOURS	INCORMA	TION CUTOFF	
requirements.							FOR SINGLE PRE		DATE OR	MILESTONE	
INTERRELATIONSHIP WITH OTHE QA-009, Plan, Qu	ality A	Assurance Progr	a m			<u></u>	ESTIMATED CO FOR SINGLE PRE			DATA DUE USER	
TE-001, Plan, Int	_		(ME)				FREQUENCY (	F ISSUE	PUBLICA	TION DATE	
TE-123, Plan, Spe Verificat		Test Equipment (	SIE)	)			☐ ANNUALLY ☐ SEMI-ANNUAL	ΙV		DR	
TE-130, Plan, Ge							QUARTERLY 81-MONTHLY			FREQUENCY	
CLASSIFICATION  □ SECRET	nerar	☐ GROUP I O GROUP 2	□ SP	ECIAL	HAND	DLING	D MONTHLY SEMI-MONTHLY AS			estone) uired 1 FACI	
☐ CONFIDENTIAL ☐ SECRET RESTRICTED DATA ☐ CONFIDENTIAL RESTRICTE ☐ UNCLASSIFIED		☐ GROUP 3 ☐ GROUP 4 ☐ PROPRIETARY ☐ PUBLIC DOMAIN	□ JP □ PR	SA DIS L DIS OJECT FORN	CREET	T	O DAILY-		ESTIMATED EXPIRATION DATE		
FORM OF DATA	KIND	O OF DATA					REFERENCE DOC	JMENTS			
N PRINTED DOCUMENT		□ ABSTRACT		INSTF	RUCTIO	NC	JPL Config	ouration 1	Manager	nent	
☐ CHART		☐ BROCHURE		LETTE	ER		Manual	gurution i	Management		
DIAGRAM DRAWING		☐ BULLETIN☐ CATALOG		LIST							
☐ FILM (STATIC OR MOTI	ON)	☐ CONTRACT		MANU	JAL						
☐ ILLUSTRATION	- ,	O DIRECTIVE		MEMO	RAND	UM					
□ MODEL		☐ DISCLOSURE		MINU			4001104015 074	ND 4 DD 0			
RECORDING (TAPE DR	DISC)	O ENGINEERING CHANG ORDER		PLAN PROC		_	APPLICABLE STA	NDARDS			
O COMPUTER CARD		REQUEST FOR ENGINE									
☐ MICROFILM (W/OR W/O	CARD)	ING CHANGE PROPO									
□ OTHER		O ENGINEERING CHANG	E 🗅	SCHE	DULE						
		PROPOSAL		SPEC		TION					
		O HANDBOOK O INDEX		STANI							
REVIEWS AND/OR APPROVALS				VO001		_					
(LIST IN ORDER OF SUBMITTA	,	DRAFT	D	ATE			PREPUBLICATION	PROOF		DATE	
SUBMIT FOR REVIEW TO'					_	_					
<u> </u>		ВУ			_	-					
<u> </u>		ВҮ			_	_			ВҮ		
					_	_					
_					_	_			_		
SUBMIT FOR					_	_			ВҮ —		
APPROVAL TO					_	-					
Man	ager,	Quality Assuran	c <u>e</u>			_					

# GE EXHIBIT DRD QA-031 VOYAGER DATA REQUIREMENT DESCRIPTION - 2ND SHEET DRD NO.: SPECIAL INSTRUCTIONS: QA-03 Cognizant Quality Assurance engineers will prepare the requirements section of the STE Specification to initiate design. SPECIAL DISTRIBUTION (IF DISTRIBUTION IS NOT COVERED BY AN EXISTING DDL WRITE IN DISTRIBUTION BELOW) OUTLINE OF CONTENTS: Scope - outline of specification applicability. 1. 2. Applicable documents - component specification, workmanship standards, etc. Requirements - measurement tolerances, safety, operability, etc. 3. Test and verification - test requirements for the equipment prior to use with flight 4. hardware, measurement studies, etc. 5. Preparation **for** delivery **-** special handling requirements. 6. Notes - as applicable.

### DOCUMENTATION RELATIONSHIP TREES

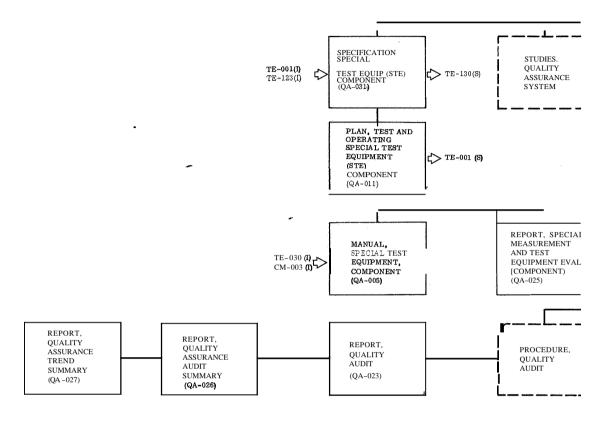
A documentation relationship tree has been prepared to show the relationships of data items within each functional category as well as their relationships across categories.

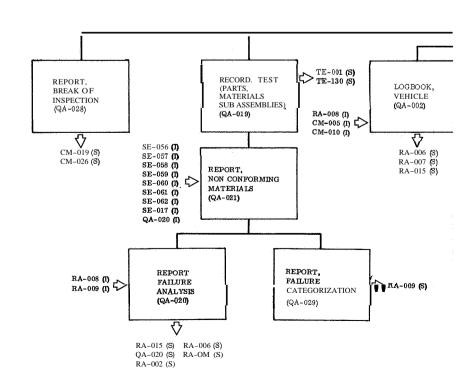
Relationships within each functional category are shown by constructing a tier pattern beginning with the top-level (or governing) data item and relating in descending order all data items within the category to this top-level data item. (The location of a data item at a given level on the diagram does not necessarily indicate the importance of that specific item but identifies and defines its relation to all other data items in that category.)

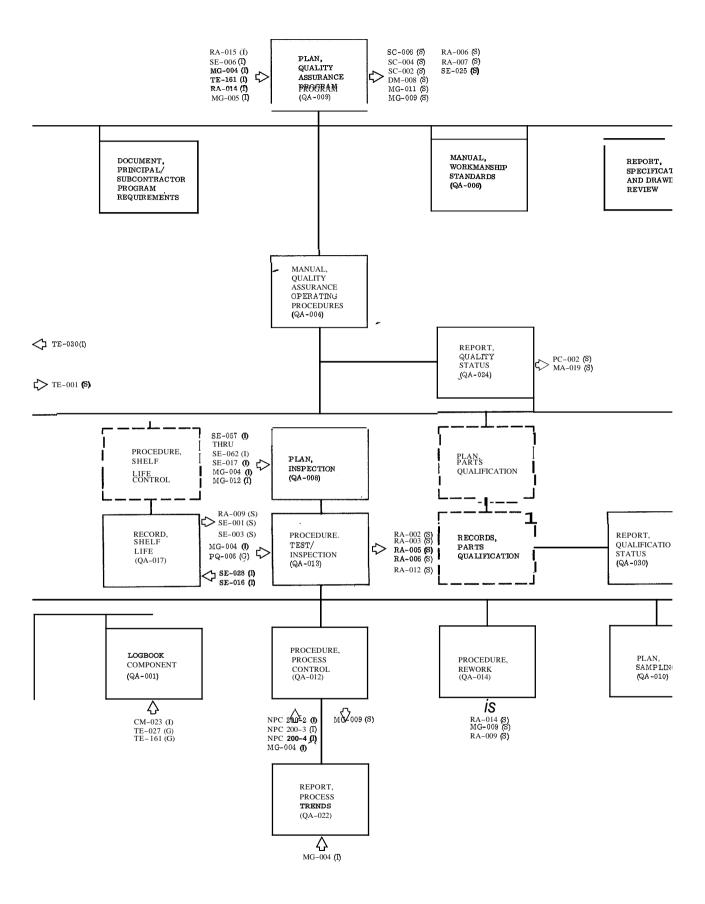
Relationships between data items in one category and data items in other functional categories are shown by (1) shaded arrows to indicate the direction of the relationship and (2) an alphabetic code to indicate the nature of the interrelationship as follows:

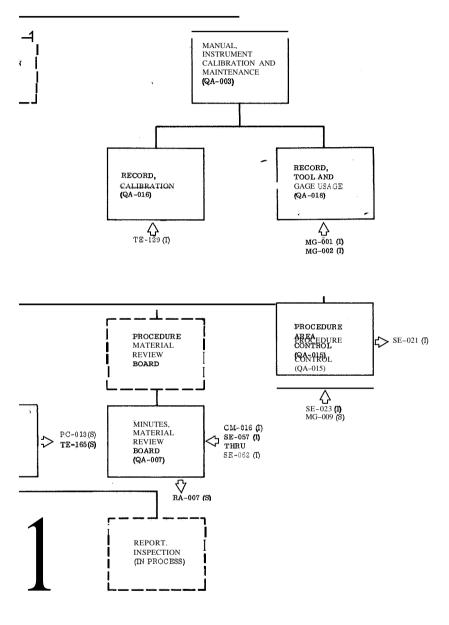
- a, Data items needed for preparation and/or support of the referenced item. (I)
- b. Data items that are supported or needed by this data item. (S)
- c. Data items that relate "to" and provide information of a general nature but are not required in an input or support role. (G)

Each data item appearing on the Data Item List (DIL) was examined and evaluated with respect to its contribution to, or dependence upon, data items appearing in other categories and is included in the diagrams. Additionally, certain data elements indicated in the user flow diagrams (but currently not identified as individual data items) have been shown within a dashed rectangle to clarify relationships.









LEGEND:

- (1) INDICATES DATA JTEMS NEEDED FOR PREPARATIONOR SUPPORT OF THE REFERENCED ITEM (INPUT).
- (S) INDICATES DATA ITEMS THAT ARE SUPPORTED OR NEEDED BY THIS ITEM.
- (G) DATA JTEMS THAT RELATE TO AND PROVIDE INFORMATION OF A GENERAL NATURE BUT ARE NOT REQUIRED IN AN INPUT OR SUPPORT ROLE

Figure E-5. Quality Assurance Documentation Relationship Tree (QA)

### DATA ITEM PHASING/FREQUENCY

Preparation requirements for Quality Assurance data items are shown in Quality Assurance Data Item Phasing and Frequency Matrix, Figure **E-6.** With the exception of control and administrative-type data items, Quality Assurance document needs have a direct relationship with the scope and complexity of the hardware program and range from piece part to system level.

The basis for compilation of these estimates are:

- a. Comparisons with other spacecraft systems, the makeup of which can be accurately described in terms of the total number of piece parts used and the percentages of non-electronic piece parts used. In the case investigated (a total of 11,740 piece parts, excluding OSE), the percentages were approximately 89 percent electronic and 11 percent non-electronic.
- b. Assume that each Voyager Spacecraft will contain approximately 100,000 piece parts.
- c. For each Voyager Spacecraft, assume it will be composed of:
  - 28 Prime Equipment CEI's
  - 36 Identification Item CEI's
  - 85 Engineering Critical Components CEI's (Configuration Management)
    Plan, Phase IB)
    149

Assume 11 Subassemblies for each Identification Item 11 x 36 396

Assume 34 Subassemblies for each Engineering Critical Component 34 x 85

2,040

Total Spacecraft Assemblies

2,585

d. Eight equivalent Spacecraft then would contain 8 x 2, 585 testable assemblies

20,680

- e. For OSE, AHSE and MDE assume:
  - 36 Prime Equipment CEI's
  - 135 Identification Items (CEI's)

1

18 Engineering Critical Components (CEI's)
(from Configuration Management Plan, Phase IB)
189

	Assume:	
	11 Subassemblies for each Identification item	
	(CEI's) 11x 135	1,485
	Assume:	
	24 Subassemblies for each Engineering Critical	
	Components (CEI's) 24 x 18	432
	Total OSE, AHSE and MDE Assemblies	2,106
	Assume two sets OSE	4,212
	Total Spacecraft Assemblies	20,680
	S/C, OSE, AHSE, MDE total assemblies	24,892
	Assume:	
	Average of four tests per assembly (acceptance testing,	
	Eng. Dev. Testing, T/A Testing, PTM Testing, Flight	
	Accept. Testing and retesting requirements	568 tests
f.	From Para. E. 2. a the number of piece part test records can be calculated.	
	8 equivalent S/C x 89,000 + 20 percent excess	726,220
	assume an average of two test records for each	
	electronic piece part	1,452,440
	8 equivalent S/C x 11,000 non-electronic piece parts.	
	Assume an average of one test record for each part.	88,000
	Total S/C Piece Part Test Records	1,540,440
g.	Using as a basis the ratio of estimated drawings for the Spaceci versus the OSE:	raft
	OSE will contain approximately 70,000 piece parts	
	Assume two sets of OSE will be produced	140,000

The Quality Assurance Data Item Density Profile, Figure E-7, shows the distribution and density of data item preparation requirements. Requirements are shown by monthly

1,680,440

6-2

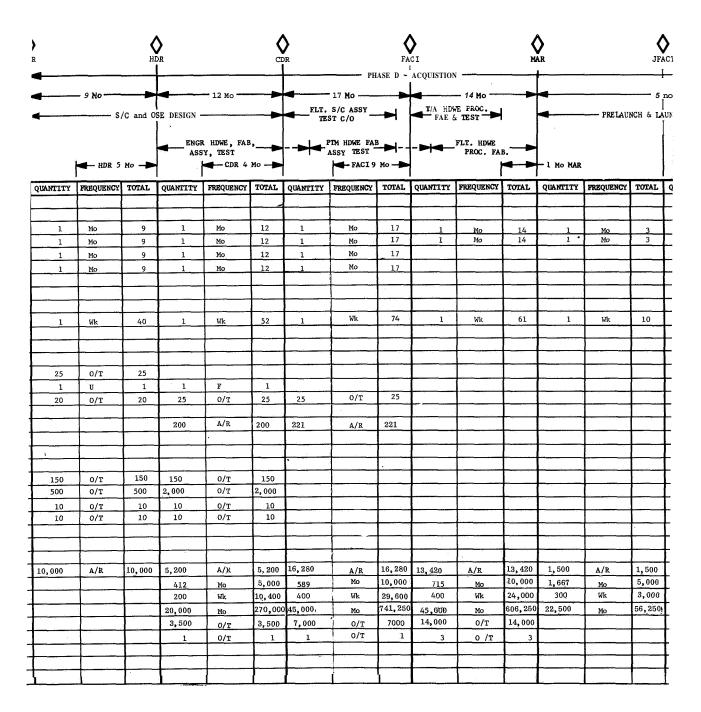
Piece Part Test Record Total

averages and reflect both formal and key informal data items. Of particular interest is the impact caused by data item QA-019, Test Records (Materials, Parts, Subassemblies).

	SDR PHASE C - SYSTEM DEFINITION 7 Mo						
QUALITY ASSURANCE (QA)			/	Pio -			
DATA ITEM TITLE	QUANTITY	FREQUENCY	TOTAL*	QUANTITY	PDR 2	Mo -	
MANUALS -	40-11-22	- Tranquarior				<u> </u>	
TEMORIDO -	·/·········	1		·		_	
QA-003 Manual, Instrument Calibration & Maint.				1	Мо		
QA-004 Manual, Quality Assurance Operating Proced	• 1	I	1	1	Мо		
QA-005 Manual, Special Test Equipment, Component		-					
QA-006 Manual, Workmanship Standards				1	Мо		
MINUTES							
					1		
QA-007 Minutes, Material Review Board				1	Wk.		
QII OO7 INIMEESS, INCOMESSA NO. 200							
PLANS							
' QA-008 Plan, Inspection				25	O/T		
QA-009 Plan, Quality Assurance Program	1	I	1	1	U		
QA-010 Plan, Sampling				10	0/T		
QA-011 Plan, Test and Operating, for Special							
Test Equip. (STE) Component		,,,					
PROCEDURES							
QA-012 Procedure, Process Control				100	0/T	10	
QA-013 Procedure, Test/Inspection				100	0/T	10	
QA-014 Procedure, Rework							
QA-015 Procedure, Area Control							
RECORDS		1			1		
						L	
QA-016 Record, Calibration							
QA-017 Record, Shelf Line		<u> </u>	<u> </u>			<u> </u>	
QA-018 Record, Tool and Gauge Usage						_	
QA-019 Record, Test (Materials, Parts, Sub-Assemb)		1,				L	
QA-001 Logbook, Component				L			
QA-002 Logbook, Vehicle							
						$oxed{\Box}$	
		<u> </u>		<u> </u>			
(continued on page 2)	l	I	l .	!-	I	I	

### \*Key Informal Data

A S/A	Annual Semi-Annual	O/T A/R	One Time As Required	I	Initial
wĸ	Weekly	U	update	F N/R	Final New and 1
MO B/W	Monthly	I/U	One Update	SDR	System D
B/M	Bi-Weekly Si-Monthly	DA Q	Daily Quarterly	PDR HDR	Prelimin: Hard Des



CDR

Critical Design Review

rised gn Review Design Review FACI MAR First Article Configuration Inspection Mission Acceptance Review J FACT

Joint Flight Acceptance **Composite Testing** 

Review

6-6-1

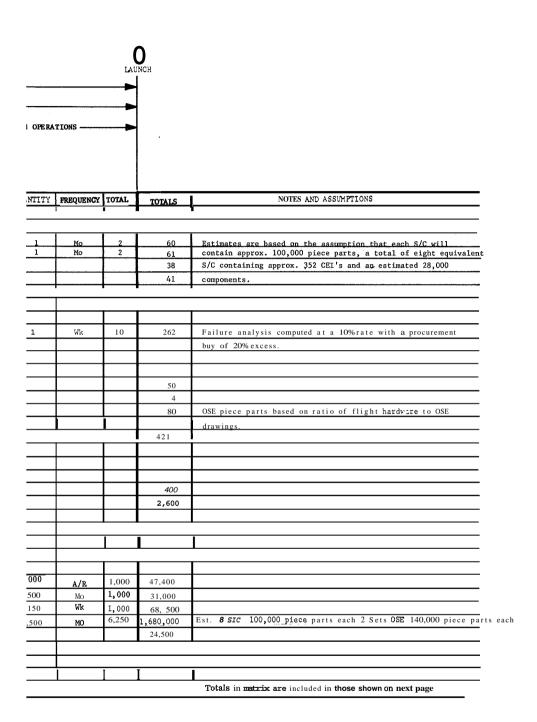
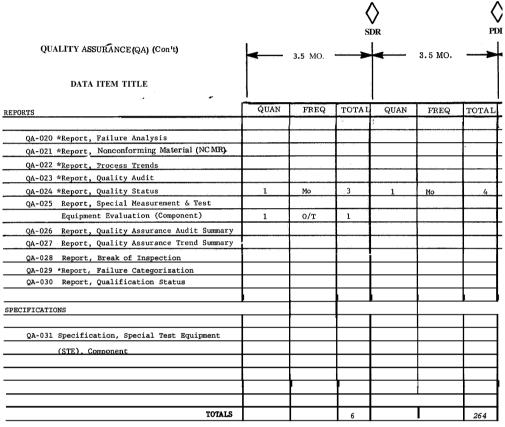
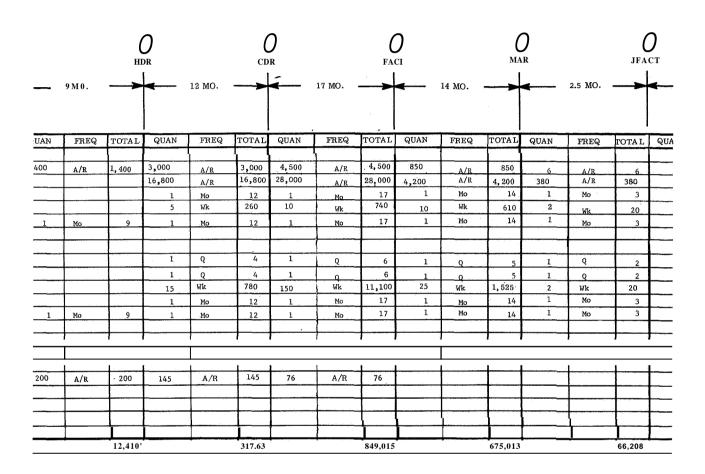


Figure E-6. Quality Assurance Data Item Phasing and Frequency Matrix (Sheet 1 of 2)



*Kev	Informal	Data

A	Annual	O/T	One Time	I	Initial
S/A	Semi-Annual	A/R	As Required	F	Final
WK	Weekly	U	update	N/R	New and Revise
MO	Monthly	I/U	One Update	SDR	System Design I
B/W	Bi-Weekly	DA	Daily	PDR	Preliminary De
B/M	Bi-Monthly	0	Quarterly	HDR	Hard Design Re



CDR FACI MAR

Critical Design Review
First Article Configuration Inspection

J FACT

Mission Acceptance Review Joint Flight Acceptance Composite Testing

iew n Review

6-8-1

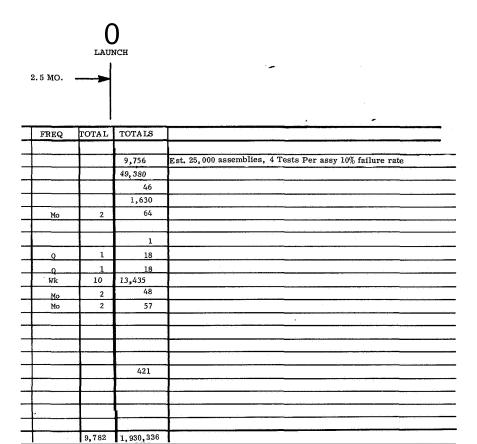


Figure **E-6.** Quality Assurance Data Item Phasing and Frequency Matrix **(Sheet** 2 of 2)

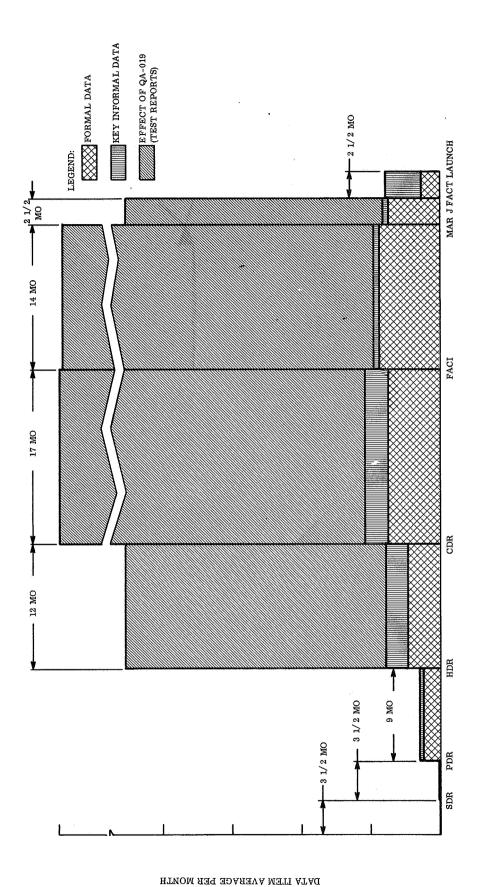


Figure E-7. Quality Assurance Data Item Density Profile