SYSTEM AUDIT REPORT NUMBER 01/35812/TV01	NQA

THIS REPORT RELATES TO A ~~AN~~ TRIENNIAL VISIT VISIT ON 02/06-08/01

Company	Other Sites Visited
MARSHALL SPACE FLIGHT CENTER	1. N/A
Address BLDG 4203, MAIL CODE ASSC HUNTSVILLE, AL 35812	2. N/A

Scope: ALL PROCESSES FOR PROCUREMENT, DESIGN, DEVELOPMENT, AND ONSITE PRODUCTION OF FLIGHT HARDWARE, FLIGHT SOFTWARE, AND ASSOCIATED GROUND SUPPORT EQUIPMENT INTERFACING WITH FLIGHT HARDWARE AND SOFTWARE, FOR WHICH MSFC HAS RESPONSIBILITY

Standard(s)	Support Documentation(s)	Non-English Languages Used

Comments/Concerns of the Assessment Team:

TRIENNIAL REVIEW WAS SATISFACTORY
ONLY 1 FINDING WHICH WAS MINOR IN NATURE
OBSERVED CONTINUOUS IMPROVEMENTS IN THE QUALITY SYSTEM THROUGH OUT SURVEILLANCE. I AM RECOMMENDING FOR CONTINUED REGISTRATION TO ISO 9001:1994

- The visit is deemed to be **Satisfactory/~~UnSatisfactory~~** (Bold means delete as appropriate.
- Unsatisfactory visits may result in a change to the next audit activity.

- **Corrective Action Plan (CAP) Instructions:**
  - Return CAP in 20 working days (all NCs & QS-9000 OIs).
  - Certificate processing initiates after receipt/acceptance of CAPs.
  - QS-9000 NCs must be cleared prior to certificate issuance.
  - Return CAP in ten days for major NCs issued during surveillance.

NQA ASSESSMENT TEAM		COMPANY INFORMATION
LEAD AUDITOR Joseph Grieco		MGT REP Sid Saucier
TEAM N/A	TEAM N/A	QUALITY MANUAL (REV & ISSUE DATE)
TEAM N/A	TEAM N/A	REV F 9/12/00

The contents of this report is confidential and must not be disclosed to a third party without the prior agreement of NQA, USA and the company named above.
Non-compliances/non-conformances raised or observations noted within this report are the result of limited sampling and therefore non-compliances/non-conformances may exist which have not been identified.
The company representative's signature indicates their agreement and understanding of any non-compliances/non-conformances and observations contained in this report.
Prior to the assessment, the company must have completed a complete system internal audit and subsequent management review documented. The quality system shall be understood throughout the organization.

Signature Joseph Grieco 2/8/01 NQA, USA Representative Date	Signature Sidney P. Saucier 2-8-01 Company Representative Date	Page 1 of 6

SYSTEM AUDIT REPORT NUMBER 01/35812/TV01

SYSTEM REVISION STATUS AND AUDIT MATRIX

X indicates reference point for ~~assessment. Note: X~~ through entire box as applicable to indicate actual function/process audited against ISO 9000 requirement.		SPECIFIC ISO 9000 REQUIREMENTS FUNCTIONS/PROCESSES AUDITED DURING THIS VISIT												NEXT VISIT PLAN
ISO 9000 REQUIREMENTS		Associate Director	Senior Quality Engineer	Audit Manager	Internal Auditors	Software Engineer	Flight S/W Group Leader	Supervisor Problem Assess.	Assessment Engineer	Project Manager	Lead Sys Engineers	Directives MCR		8/01 See visit summary
Mgt. Responsibility	4.1	✓	✓											✓
Quality System	4.2	✓	✓									✓		
Contract Review	4.3													✓
Design Control	4.4					✓	✓			✓	✓			✓
Document & Data Control	4.5													
Purchasing	4.6													
Control of Customer Supplied Product	4.7													
Product Identification & Traceability	4.8													
Process Control	4.9					✓	✓							
Inspection & Testing	4.10													✓
Control of Inspection, Measuring & Test Equip.	4.11													
Inspection & Test Status	4.12													✓
Control of Non-Conforming Product	4.13													
Corrective & Preventive Action	4.14			✓				✓	✓					✓
Handling, Storage, Packaging, Preservation & Delivery	4.15													
Control of Quality Records	4.16													
Internal Quality Audits	4.17			✓	✓									✓
Training	4.18				✓									
Servicing	4.19													
Statistical Techniques	4.20													
Customer Complaints				✓				✓						✓
Use of NQA Logo			✓											✓

Page 2 of 6

Note: Please fill in table including areas/sites/departments/functions visited during each visit.

SYSTEM AUDIT REPORT NUMBER 01/35812/TV01

SYSTEM AUDIT RECORD

Auditor(s) Joseph Griaco

Date 2/6-8/01

Clause No.	Applicable Standard	Record of Details of Audit (names, referenced documents, depts, etc.)	NC	Obs or OIs
4.1	ISO9001	Interviewed Associate Director, & Senior Quality Engineer, Reviewed Policy directive MPD 1280.1 Rev E, Marshall Management Manual & Procedures & Guidelines MPG 1280.1 Rev B Management Review. Assessed Minutes of Management Review meeting dated 12/12/00, verifying Attendees, Agenda & Content. Assessed 3 years of Management Review meeting Minutes & presentation charts, dating from 11/25/97, Looking for Trends, Continous Improvements, changes made to Quality System & closure/Follow-up of Action Items. Verified Employees Knowledge of Quality Policy & MGT Rep. Throughout Review.		
4.17	ISO9001	Interviewed Audit Manager, Reviewed MPD 1280.1 Rev F & MPG 1280.6 Rev B Internal Quality Audits, Assessed Internal Audit Schedule 2000/2001 & All Internal Audit Reports since last Surveillance, verifying Element Coverage, Auditor Independence & Auditor Training (5). Reviewed 3 yrs of Internal Audit Findings, Looking for problem Areas, Trends etc.		
4.09	ISO9001	Interviewed Lead Software Engineer & Software Flight Group Lead, Reviewed ED14-SS-001 Rev F S/W Development Plan & Project Requirements. Assessed the MSFC Flight S/W Life Cycle process, by Receiving a walk Through of the UPA project, from the S/W Requirements Analysis Through the Detail Design stage of the process, verifying the Process steps from SDR Through CDR.		

TOTAL See Page 5 of 6

PAGE 3 OF 6

C1404/02-26-98/E

SYSTEM AUDIT REPORT NUMBER 01/35812/TV01

NQA

SYSTEM AUDIT RECORD

Auditor(s) Joseph Grieco

Date 07/06-08/01

Clause No.	Applicable Standard	Record of Details of Audit (names, referenced documents, depts, etc.)	NC	Obs or OIs
4.14	ISO9001	Interviewed Supervisor of Problem Assessment Center & Assessment Engineer, Reviewed MPG12804 Rev E, MSFC Correction Action System. Assessed Monthly Reports for RCARs: opened, closed & Delinquent. Discussed statistical Summary used for Trends on Lateness. Sampled 15+ RCARs & nineteen Customer Quality Comments (All Positive) closed & open Caps from NQA SOS Surveillance. Assessed All Audit findings since AOI Assessment Looking for recurring problems or problem Areas.	1	
4.4	ISO9001	Interviewed Project Managers(2), & Lead System Engineers(2), Reviewed MPG 8060.1 Rev B, Flight System Design Control, MPG 7120-1B Program Project Planning. Assessed project PROSEDS Reviewed Project Plan TDIS-PLN-002 updated 12/15/99, both Requirement Phase & PDR were out of ISO9001 Scope, verified CDR 8/31-9/2 & CDR PRE-board Meeting 9/29/99, sampling RIDs 3.3.1.2 Natural Frequency. Examined Monthly Status Reports (3 months), & Test Reports PROSEDS-DEV-ED99-130, ED99-140 & ED99-138. Sampled project MSRR-1, Assessed System Requirements Review, PDR 4/19/99 & PDR Preboard 7/21/99, sampling RIDs & RIDS Closure from above Reviews.		

TOTAL See Page 5 of 6

PAGE 4 OF 6

C1404/02-26-98/E

SYSTEM AUDIT REPORT NUMBER 01/35812/TV01

NQA

SYSTEM AUDIT RECORD

Auditor(s) Joseph Grieco

Date 02/06-08/01

Clause No.	Applicable Standard	Record of Details of Audit (names, referenced documents, depts, etc.)	NC	Obs or OIs
4.2	ISO9001	Reviewed Level 1, Level 2 & Level 3		
		Documents with the Directives Manager:		
		Level 1: Marshall Policy Directive Rev F,		
		Level II: MPG's (various Revs),		
		Level III: MWIs (various Revs),		
		Reviewed ISO 9000:2000 Implementation Plan		
		which included comparisons to MSFC MMS & ISO		
		9001:1994, Customer Satisfaction, Continuous		
		Improvement, ISO 9001:2000 Training etc.		
		This review was with the SA. Quality Engineer,		
		& Associate Director.		
		TOTAL	1	0
		PAGE 5 OF 6		

C1404/02-26-98/E

SYSTEM AUDIT REPORT NUMBER 01/35812/TV01

Ref No.	Clause No.	Applicable Standard	NON-COMPLIANCE & OBSERVATIONS RAISED (ISO 9000/QS-9000/TickIT/AS9000) NON-CONFORMANCE & OBSERVATIONS RAISED (ISO 14001)	NC Obs OI (QS)
1	4.14	ISO9001	Found RCARs Delinquent without Extension date Applied For. i.e QD35-RCAR88-Last Action Requested was 8/31/00 (still open), QD110-R147 Asked for Extension 8/10/00, Extension Rejected (still open), QD69-RCAR116 has been on the Delinquent List since June/00 (still open) etc.	NC

Signature (NQA, USA) Paul V Brien 2/8/01 Date

Signature (Company) Audrey P. Dawson 2-8-01 Date

C1405/02-26-98/E