

MSFC SCRIBE NOTES FOR 2nd SURVEILLANCE AUDIT – Feb ‘99

Below is the Hot Link to the Scribe Notes for the 2nd Surveillance Audit performed by National Quality Assurance, Inc. (NQA) at MSFC for Feb 22, 23, & 24, 2000.

Below is the list of the primary elements the Auditor looked at for this specific Surveillance Audit; however, he also ask the standard generic questions (i.e., Quality Policy, Management Representative, etc.)

Auditor	Primary ISO Elements Reviewed
Auditor #1 (Lead)	1 - Management Responsibility 2 – Quality System 4 – Design Control 11 – Inspection, Measuring & Test Equipment 13 – Control of Nonconforming Product 14 - Corrective and Preventive Action 17 - Internal Quality Audits

Date: 2-22-99 Morning

ISO Element(s): 4.1 and 4.17

Auditee Organization Code: EA01

Building: 4200

N = NQA

A = Auditee

After initial introductions the following transaction took place between the auditor and the auditee.

N: What is your name and position?

A: Satisfactory

N: How long have you been employed at MSFC?

A: Satisfactory

N: Who do you report to?

A: Center Director

N: How long in your present position?

A: Since February

N: How many people in your present organization?

A: Currently approximately 1570 civil servants; however, will change in May due to the center reorganization.

N: What has been ISO's impact on MSFC?

A: Profound impact on MSFC and how we do business, because it has been a fundamental change in how everyone does their job... Philosophical discussion held at this point.

N: Is the Center Director committed to ISO?

A: Absolutely. It is a part of his everyday agenda. Discussion held.

N: How committed are the people that report to you?

A: In the beginning there might have been some apprehension, but the Center as a whole has embraced the concept and it seems that the center is on track with ISO.

N: Looking down the road, what impacts will ISO have when your organization is divided?

A: A fairly long discussion was held where it was noted that due to the fact the ISO is forcing us to develop a strong set of working documentation it may actually help the process out.

N: Does your organization get together and have meetings and discussions related to issue brought forth from the Management Review?

A: Yes, it is accomplished through weekly staff meetings and the like. For instance, safety is a top priority with the Center Director and it is discussed regularly within S&E.

N: Any questions from you?

A: No, not at the moment.

N: ISO Rep?

A: Correct Answer

N: Quality Policy?

A: Satisfactory

Date: 2/22/99 Afternoon, 12:30 pm

ISO Element(s): 4.17

Auditee Org. Code: CR10

Building: 4203 / Room 6427

- N What is your job title?
A Audit Manager
N May I see your 1998 and 1999 Internal Audit schedules?
A * Shows schedules on computer, and explains the excel spreadsheet. Prints out a copy for NQA.
N What does your procedure say about audits?
A Procedures say that we will audit each organization at least once a year.
N Please show me that in the procedures.
A * Explains the process of internal audits.
N How can you tell the status of the internal audits?
A There are several ways..... * Shows current schedule and explains. * I always attend the internal audit's opening meetings / exit briefings and some daily briefings, so I always know the status of the internal audits.
N Can you show me one audit that Bob Schwinghamer signed off on?
A Yes, but ??? holds those records. I will get one when she returns.
N I need to see copies of approved documents. Where does the schedule show that the Management Representative should sign off and approve the schedule? Is there anything in the procedure that says this?
A No, we may need to change that in the procedure.
N Who audits 4.17 Internal Audits?
A Lead Auditors on the center. We have 2 separate audits scheduled in April and September of 1999 to audit 4.17.
N The best time to audit 4.17 is December to see if all of the audits were done successfully. How does 4.17 apply to each of the organization?
A Auditors look for auditee's acceptance. They are responsible for getting escorts, getting familiar with applicable documentation, etc.
N You're going to a different format of auditing now [auditing by Org. to auditing by element]. Where is that reflected in the procedure?
A * Explains that the procedure states that we can do audits either way we choose.
N At the end of the year, you should use a person who has not participated in the audit process to audit 4.17. You could choose a person from another center to come and do the audit. I will note this as an observation that you may want to look at. This is just to try and raise the bar a little at the Center. We will continue this discussion further and look at some audit reports later this afternoon.

Date: 2/22/99 Afternoon, 1:20 pm

ISO Element(s): 4.17

Auditee Org. Code: DE01

Building: 4200 / Room 918A

N * Discussed minor findings in previous audit. How are important issues brought to the attention of the Management Review?

A A lot of issues are coming up in the focus team meetings. Discussion consists of open forum findings and new ideas, and actions given prior to the implementation meetings. I think the system is working quite well. For example, we had issues that the time it took for the closer of NCR's was entirely too long. Now we are trying to get them closed a lot earlier, by asking the responsible person to give a status at the weekly implementation meetings. It is working so far. I am also amazed at how much work is involved in implementing the ISO system.

N How long have you been working on this task?

A About 2 months.

N How long have you been working for NASA?

A I have been here since 1956, when I was a co-op. Then I graduated in 1958. Except for the 4 years that I went to the Air-force, I have been here.

N Has ISO 9000 improved things since earlier years?

A I think the Center went through a lag period. The implementation of ISO has helped tremendously for the Center. For example, the documentation of safety in the past years was not so good. ISO is requiring that documents be defined for everyone.

N Do you still have test firings out here?

A Yes, but a large portion of tests are being done at Stennis.

N Where are you hoping that ISO takes MSFC in the future?

A We want to be considered as #1 in Safety at NASA, and we want a high success rate for top quality parts.

N How many people report to you?

A Three. Secretary and two corresponding secretaries.

N In your travels around the Center as the Management Representative, what's your view on the employee's acceptance of ISO 9000?

A I think that people are getting used to it, and it is helping them do better jobs.

N How many people work here?

A About 2700 civil servants and twice as many contractors.

N What is your goal to bring the contractors in the fold?

A The contractors must be complaint to keep their contracts with us.

N Do you think the new Center Director has a good buy in to ISO 9000?

A Yes, he has been through 3 certifications in his previous jobs. He is a good guy.

N * Reads 4.1.3 of the 9001 requirement about Management Review. What are your objectives?

A We are gaining metrics, information on trends in audits, closure of NCR's in a timely manner, and always keeping the attendance to meetings.

N Are the trends being documented?

A We are documenting the attendance to meeting which shows the organizations participation. We are also sending copies of the actions and minutes of the meetings to the Lab Directors to make sure they know what is expected of them.

N Do you ever invite the Center Director to your meetings?

A He is always welcome at our meetings. He is very interested in the implementation of ISO 9000. He has ordered that every conference room on the

Center has the MSFC Quality Policy on the wall, and that we publish articles in the Marshall Star newsletter. People are seeing the results and their work is better.

N I always ask people to tell about issues they are concerned with. Do you have any questions for me?

A * Discussion on implementation meetings.

N * Discussed NQA's yearly Auditor/Customer training class. Said that we may want to participate in that session.

A We are going through a major re-organization here at the Center. They have an opportunity to ask questions and tell the upper management how they think the re-organization should be structured. Employees have been very responsive.

Date: 2/22/99 Afternoon, 2:00 pm

ISO Element(s): 4.17

Auditee Org. Code: DA01

Building: 4200 / Room 914A

N This is a time when the audit is not pass or fail. I just want to get a feeling of what's going on, your job, etc.

A This is my first job as a civil servant. I have been through 3 ISO 9000 certifications in my prior jobs.

N Can you name those companies you worked for during the registrations?

A I was Vice President of an Oceanering business, we got a Navy business certified, and one other entity.

N Do you remember who was the registrar during those certifications?

A No, but I can find out if you want?

N That's not necessary. When did these audits occur?

A About 2 years ago, 1 year ago, and 6 months ago. The people did a great job. The standard they were working to was 9858. I've been here since September and it's been like drinking from a fire hose.

N What are you hoping to see happen with ISO 9000?

A I think that we should bring in the rest of the Center into an "In-Scope" status, but we currently are working on a major re-organization. There's a lot of work to be done on this project, but soon it will be done and we can focus more on ISO 9000. ISO gives us a basis to improve our system. I'm very much in favor of continuous improvement with preventative measures.

N * Talks about how upper management should be involved with lower-level meetings. If you have an "open door policy", the people will feel like you care about them and the success of the system. You may want to ask the people at these meetings if there is anything that needs to be brought to the attention of the MQC meetings and Management Reviews. What has been the response of the people towards ISO 9000?

A I think people here are tolerating it and they don't understand the full benefit of ISO 9000 yet. They think that they have been doing a job for years, so why

change the routine. I don't feel connected to the people yet. I spend most of my time away at other Centers. It's not as good as I like it to be, but I hope that this new re-organization will change this situation. I could then delegate others to travel in my place.

N What do you hope to get out of your new Management Representative?

A We can change the way we do business. We can make the system better. He is currently working on closing NCR's faster than we have been closing them.

N What are some of your objectives? What changes will I see the next time I come?

A I hope you will see good task agreements. I'm looking to pick 2 or 3 major problems and fix those. If you try to fix too many problems at once, then you usually don't get anything accomplished. So, if we focus on 2 or 3 things, we can improve in those areas. We will assign teams and go work the problems. Once the people see that they have fixed the system, they will be happy to work in that area. Then they will be ready and eager to improve more systems. I hope to make us more customer focused, product oriented and make the process more streamlined.

N Each time we come, we will look at different elements. We don't expect you to change everything over-night. ISO will soon start to focus on continuing improvement.

A I'm not happy in what I see in that regard. The people may not be ready for continuous improvement, yet.

N Do you have any questions for me?

A Where do you think we stand as far as employee buy in to ISO 9000?

N I'm not here long enough to tell. However, your internal audits show many NCR's were written. That was very surprising to me, so I'm very interested in seeing those. It either tells me 1 or 2 things: either the auditors are doing a really good job, or the people are not doing a good job at following their own procedures.

Date: 2/22/99 Afternoon, 2:45 pm

ISO Element(s): 4.17

Auditee Org. Code: CR10

Building: 4203 / Room 6427

A * Shows NQA the audit schedule. Explains thoroughly....

N Show me where the internal auditors have completed their training. Where are the training people located? You still need to update the schedule and try to maintain it for a January through December year. That way, it's easier to understand. You can have the fiscal year reflected if you like, but it only needs to reflect a 12 month period. Were all the internal audits completed in 1998?

A Yes

N Show me your audit reports for elements 4.6, 4.4, and 4.18

A * Gets the 3 reports out of the quality records file.

N Where does the procedure call out for maintaining the Audit documents?

A * Shows him page 16 of 25 of the procedure.
N * Looks at the September 14th audit and asks about the checklists. He has questions on the validity of the dates on the report. What does it say about observed concerns in your procedure?
A Shows page 12 of 25 paragraph 4.2.3
N Is there a definition of Objective Evidence in your procedure? What do you consider as examples of OE. It should be stated in the procedure.
A There is no definition in the procedure for OE. The OWI's tells each organization what the quality records are. This is the objective evidence. The procedure does not spell it out mainly because that is covered in the auditor's training class.
N Find something in the auditors training manual that defines Objective Evidence.
A * Shows NQA the information about OE in the auditor's training manual.
N This is buried too deep in the manual and hard to find. This is why you should have the definition in the procedures because the auditors will review the procedure a lot more often than the class manual. Show me another audit.
A * Shows September 14th - 18th, 1998.
N Who conducted this audit?
A * Told that ??? was the Lead Auditor.
N What projects did they look at? Did he reference the projects?
A Yes, There is a page here that tells us which projects he looked at.
N The checklists do not record enough information about OE. You need to cover OE in your procedure or re-train you auditors. Let me see another audit report.
A * Shows the November 2 - 6th, 1998 audit file. Ran out of time. Must finish this audit on Wednesday after the lunch break.

Date: 23 February 1999 (Tuesday) Morning (8:00 AM)
ISO Element(s): 4.0 thru 4.9
Auditee Organization Code: CR10/(A)
Building: 4203 (MSFC)

The first order of business was evaluating the in-house 'Training Records'. Copies of these records are filed and available in the office of the "A". "A" also indicated that the original files are available in the MSFC Training Office (Bldg 4200).

"N" asked to see the Auditor's (Lead & Internal) "training records/audit files". Pursuant to this request, all files with specific auditor's identified were made available for scrutiny and review. There was one exception, not available at the time of the review in the "A" file, which will be secured from training, and made available in the War Room for "N".

"N" asked general questions about NCR's: (1) how they were tracked, (2) how they were filed, (3) how many lead auditors at MSFC, (4) how many internal auditors at

MSFC, (5) specific details on identifying that the NCR's are -- open/closed, definitions, start dates, actual submittal dates required for audit reports (typically 10 day's), sequence of time to respond back (typically 10 days), follow-up verifications conducted (10 day's), and evaluating the steps for corrective action (another 10 day's to confirm and agree).

"N" made an observation (minor) that objective evidence should have more than just a "yes/no" answer (especially in Blocks 5 and 7 of the NCR's), objective evidence remarks to vague (not explicit enough). The only other protocol was related to handwritten notes (no clear date documented on notes).

"N" desired to look at internal auditor check lists (which were made available by "A"). Specifically, NCR #245 (November 13, 1998). This NCR was initiated 11/2-6/98. The elements evaluated included: (4.1, 4.5 and 4.18). This was a center-wide action.

Another NCR was checked (NCR – 27 April 1998). This NCR was a center-wide action, as well. The NCR report was reviewed, the internal audit checklists were scrutinized. The primary elements included: (4.13, 4.14, 4.16 and 4.18). The audit date was held between 27 April and 01 May, 1998.

"N" requested a look at NCR #168. It was made available by "A". The lead auditor for this NCR audit was checked to verify details in the "training records". "N" made a few comments about "tick marks and the relevancy of initials by auditors" when checking the objective evidence. On this particular NCR, five auditors were on the team, all were verified and checked for proper validation (2 lead's and 3 internal auditor's).

"A" used a yellow highlighter to aid the "N" in the evaluation process.

Next on the agenda, was to move to the next stop to begin audits on two (2) additional projects, beginning with Project Managers and related personnel (JA21).

Date: 23 February 1999 (Tuesday) Morning (8:00 AM)

ISO Element(s): 4.4

Auditee Organization Code: JA21/(A)

Building: 4203 (MSFC)

The first project under scrutiny was the "Vapor Compression Distillation" (VCD), a Space Station Project associated with the environmental control and processing of urine. The audit began in Building 4203/Rm 3654. The "A" was supported by other members of the VCD design team.

"N" reviewed the specific element being audited with the "A" and support design team. Element (4.4) Design Control was summarized and then questions ensued. "N" initially wanted to get clarification on the title of the "project" under review. "A" cordially

provided the details, upon request. Then, "A" began to talk about the scope of the project and iterated that this project was a carry-on from a previous project team, who had begun a previous project design for this Space Station Rack. Therefore, the hardware for this project was brought over from elsewhere, was not initiated at MSFC, but initiated through a previous contractor.

"N" asked, well who is the customer (?) Do you have a Task Agreement (TTA) (?) "A" answered (yes), TTA is in the quality records. "N" wanted to verify that it talked to the VCD (To Be Verified, as the audit progresses). "N" wanted "A" to show some samplings of procedures (defined requirements/outlined objective evidence) for ISO Standard Elements (4.4.1 and 4.4.2). "A" provided this information via MSFC-RQMT-2823B (12/18/98). "A" also provided the project overall plan (Plan #SLS-VCD-001). The title on the project plan was "Requirements, Verification & Compliance Document" (RVCD).

"N" asked "A" what was the intent of the project (?) Define the hardware requirements ? Where; what stage is the project design now (?) "N" wanted to read what the documents had to say. "A" and members of the support design team responded to these questions, as follows: currently, this project is "near the end of the design phase" and "N" was permitted to read the documentation on the VCD.

"N" asked what has happened so far (to date) (?) "A" commented that critical design reviews had occurred and others are on the schedule, as well. "N" wanted to see (a) defined requirements, (b) designs to meet requirements, (c) schedules (including milestone), (d) layout drawings, and (e) critical design review documents. "A" offered the MSFC PD4.1, to explain the project requirements, as defined. Again, "A" pointed out that they took existing hardware (and the project has evolved from there). The schedule was recently updated (2/22/99), and it includes the ship date, launch date, etc... The preliminary drawings were taken from the LSI (contractor drawings, as supplied). With respect to the critical design reviews, RIDS and Board meeting minutes are the verifying objective evidence available for evaluation (in the quality records file, downstairs in the project library).

"A" indicated that most of the paper work associated with this project is stored in the library. The hardware is located in a bonded storage area (simply a box of parts, etc.). Work orders (EH-Lab, Fabrication Requests,, some of which are shop generated. "N" queried about the process control status, work order status (?) Some of the parts have been cleaned and bonded in storage. Also, this project is in the detail planning phase, attempting to translate the current design plan into a working, deliverable product by June 2000.

"N" asked general ISO questions of supporting personnel. Questions such as, who is the ISO Management Rep (?) And, what is the MSFC quality policy (?) Just to name a few!!! Task Agreement (TTA) was checked and verified. VCD reference confirmed. Quality record (MG 105, FY98, signed -- 12/2/97, JA21)

The audit team then moved down to the VCD library (a secured, control accessed file room, Rm 2433, Bldg 4203). Three file drawers were identified (quality records, control records and historical records). The CDR Plan included an initial memo dated 7/8/98, etc.... A white binder folder dated 9/18/98 contained the minutes highlighting the intent, significant issues and action items.

“N” wanted to check the Review Item Discrepancies (RIDS) and Reference Documents. Specifically, VCDA34 and VCDA37!!! “N” was curious about the status of each, whether they were open (or) closed. “N” also wanted to review records for detailed procedures for storing documents. The VCDA34 and VCDA37 were both still open. Action is still being worked, as of 8/11/98 and 8/14/98, respectively.

Moreover, no flat file for drawings (original drawing and copies sort of rolled up on top of file cabinets (observation). It was also pointed out, during the audit that validation labels were affixed (stamped) onto the official drawings, as evidence of the most current (actual drawing in the process) prior to documentation release. The validation labels include signature references, etc....

The CM Plan (1/15/99) is simply a data management plan used for review. As far as design procedures, (observations) they are inherit upon other designers hardware, not MSFC original designs. VCD drawings are baseline/benchmark drawings converted into MSFC part drawings.

The audit team then moved onto Building 4705, to validate the Manufacturers Work Orders (controlled by ASRI). Upon arrival, sample documents were presented. These documents included: Request for Work, Contractor Request Work Order Form and Status, as well as a Fabrication Services Request sheet. The VCD item verified was the Project No. 99V-1515 (889-014) AA2 S3-1 S1-1 (Room B 117, Bldg 4705). The part number inspected was the 96M18084-1. This P/N is an altered MSFC item drawing. No “EO” initiated!!!

As time elapsed, additional inspection activities were verified. “N” asked about calibration equipment. “A” and support team, along with contractor, clarified the process for insuring that equipment is calibrated prior to use. Inspection and calibration is conducted by another in-house contractor (calibration equipment is only used, government furnished). “N” indicated that other equipment will be perused, later in the afternoon.

“N” wanted to see more parts. “A” and support team offered to show “N” VCD parts and parts list references in the Tent (100K Clean Room, Bldg 4705). All parts were boxed as previously noted and verified. VCD P/N’s: 16575-3 (VCD61); 16575-20 and 12425 (welded purge pump assembly).

In conclusion, prior to breaking for lunch: (1) file storage was flagged (minor observation) and (2) validation labels on official drawings (minor observation, deserving a plausible corrective action mention).

Objectives included: wanted to see and review -- 1) files, (2) physical hardware, (3) plans and (4) ISO Standards.

Date: February 23, 1999 Afternoon

ISO Element(s):

Auditee Organization Code: MG22

Building: 4203

Microgravity – Dynamic Control Protein Crystal Growth DCPCG
Chief Engineer Representative
ISO Org. Representative
Project Manager

1. N: Would like to see task agreement.
1. A: Satisfied

2. N: Do you work from task agreements.
2. A: Yes, paper and electronic.

3. N: Who actually oversees project.
3. A: ????, Science Engineer, Quality Representative

4. N: Latest task agreement.
4. A: Reviewed EJ71 Task Agreement, Dated November 30, 1998.

5. N: Do you have a schedule/milestone chart.
5. A: Prima Vera Schedule, Over 600 activities/milestones. ??? presented top level “Project” schedule. Last status January 31, 1999. / Stated Monthly

6. N: ?????? – How long at MSFC
6. A: 17 years.

7. N: When did DCPCG start.
7. A: Approximately 4 years ago.

8. N: Anticipated project end.
8. A: Reflights through 2004; August 2000 first flight.

9. N: What is DCPCG
9. A: PI – RDT, PDR, CDR, Vapor Lock Temperature Control Module
(Scribe had a difficult time hearing this response)

10. N: Are there drawings.

10. A: Contractor maintains drawings. ??? maintains has PDR/CDR
11. N: What happens when Contractor wants to change drawings.
11. A: As this is a Performance Based Contract, the Contractor can change the drawings. MSFC has safety requirements; interface requirements; and science requirements.
12. N: Is there a Statement of Work
12. A: There is a Performance Work Statement which is a Quality Record. ??? also explained what a Modified Performance Based Contract is. Auditor was satisfied.
13. N: Would like to see original Statement of Work.
13. A: Satisfied.
14. N: Any flights yet.
14. A: Not until 2000.
15. N: How are RIDS written.
15. A: - Result of PDR - Have a RIDS process. - ??? has all RIDS – hard copies and electronic database.
16. N: Where is it defined that we use a Modified Performance Based Contract.
16. A: - Letter from Dan Golden - Modified actually means no fee. - Defined in the Project Plan
17. N: Date of contract award.
17. A: Scribe did not hear response.
18. N: Where is the latest revision to the contract.
18. A: ????, Contracting Officer, Procurement maintains latest accumulative Modification to the contract. We revise the requirements through a modification to the contract. The modifications are approved by the COTR; and are approved or negotiated with the Contractor.
19. N: Would like to see Project Plan.
19. A: Dated June 16, 1998.
20. N: Who is responsible for design changes.
20. A: Depends on the type of changes. - Level 3 vs. Level 4. - Strictly performance – UAB - CDR – changes are presented.
21. N: Who prepared drawings.
21. A: Contractor.
22. N: Are the drawings signed off by MSFC.
22. A: No, the drawings belong to UAB. - We provide verification of the test

procedures; how the Contractor designs the hardware is their business.

23. N: What procedure talks about the Project Plan.

23. A: Scribe did not get response but auditor was satisfied.

24. N: Would like to look at Performance Specifications.

24. A: - Performance specs baselined at UAB level, verified by MSFC. - Any changes approved by MSFC. - MSFC outlines requirements.

25. N: At PDR what verifications are made.

25. A: - Overall design. - Pre-structural analysis - Safety

26. N: Who does software design.

26. A: Contractor.

27. N: Who does UAB have working on this.

27. A: The have a Commercial Research Staff of 25-30

28. N: How many MSFC people working on this project.

28. A: 4-5

29. N: Where will you be in August 1999.

29. A: - Components low level – in house testing. - Environmental testing - Inspection and testing - Calibration of hardware December 1999.

NOTE: AUDITOR EXPECTS TO VISIT THIS AREA FOR A FOLLOW-UP IN AUGUST.

30. N: Reviewed the RIDS

30. A: Satisfied

31. N: Reviewed PDR.

31. A: Prepared by UAB; List of everything in the data pack; Contract Number.

32. N: How are people at UAB to work with. Are they real laid back.

32. A: Very easy; no they are not laid back.

33. N: Who signs off PDR.

33. A: UAB; Chief Engineer; Safety; Quality - Type 2 documents; response would be a RID

34. N: Explain drawing package in the PDR Package - dated December 12, 1997

34. A: - Itemized cover page - Responded to with RIDS - UAB prepared, reviewed and approved. - Just received CDR package. - CDR scheduled for March 8 & 9 -

UAB has good document control

35. N: RIDS Process

35. A: - Process for RIDS on Web; UAB can review on the Web - Configuration Management has RID control; track RIDS - No additional RIDS from the PDR; will start again with the CDR.

36. N: Look at some RIDS; how many.

36. A: Have 22; 6 were considered non-RIDS – comments did not require response. - All RIDS closed. - RID #1 – From Astrionics Lab – ground one safety pack. UAB agreed and corrected.

37. N: Who closed.

37. A: ????? / Developer; UAB agreed to changes.

38. N: Where does RID process indicate RID will go back to initiator for sign-off.

38. A: - Not signed by initiator. - ??? sends back to initiator but not required to in the process. - Twenty years ago it was required in the process but was found to cause unnecessary delays. - The Chief Engineer represents the team. - The Board actually closes the RIDS.

39. N: Review RID #5

39. A: Experiment Requirements Document – UAB concurred; not an actual requirement by MSFC.

Date: February 23, 1999 Afternoon

ISO Element (s): 4.11

Auditee Organization Code: Calibration Facility

Building: 4650

Calibration Facility

Teledyne Brown with 2 subcontracts; SIMCO and ERC

SIMCO – Physical/Mechanical

ERC – Electrical/Electronic

Contracting Manager, SIMCO

Technical Monitor for Calibration Facility

Secretary II

1. N: How many pieces at the Center are calibrated.

1. A: 29K+

2. N: How do you maintain recall each month.
2. A: - Had 3000 new pieces at start of ISO. - Use ECN number/ serial number/ manufacturer/item – put in database - Send monthly notice to equipment contact
3. N: Look at recall list for January and February
3. A: Shown electronically; approximately 135 pieces per month.
4. N: Show process for recall.
4. A: Identified in P11.1.
5. N: What does procedure say about approved vendor list.
5. A: - Used Procedure 6.01; RFP and SEB - SIMCO and ERC on approved vendor list. List is maintained in Procurement Office. (N will want to visit on Wednesday)
6. N: Who maintains the recall list.
6. A: Answered.
7. N: Where does it state what equipment is calibrated and how often.
7. A: - Category codes - Every item has been given a calibration interval - Past history and manufacturer's recommendation - SIMCO/ERC – Procedures dated 2-1-98.
- P11.1 requires contractor to prepare procedure.
8. N: How many employees ERC/SIMCO
8. A: ERC – 9 / SIMCO - 14
9. N: What are the groups.
9. A: SIMCO – Physical/Mechanical
ERC – Electrical/Electronic
10. N: Where do you keep records of calibrated equipment.
10. A: Certificates – keep hard copies; Intervals are kept electronically.
11. N: How is equipment brought back in for recall.
11. A: Pick up by Calibration Facility or brought in by user.
12. N: How many equipment categories are there and where are they listed.
12. A: 5 Categories / P11.1, Appendix A
13. N: What category is the Master Standard
13. A: Category 1
14. N: What are some of the master standards
14. A: - Master gauge blocks - Usually go to Army for calibration. Army sends certificate. Some are sent to manufacturer. (Through TBE ISO not MSFC)

15. N: Who maintains hard copies.
15. A: Answered
16. N: Where is equipment kept until calibrated.
16. A: Room 120A Holding Area
17. N: Looked at incoming and outgoing area.
17. A: Satisfied
18. N: What number on equipment is used for control.
18. A: ECN or assigned a number if ECN not located.
19. N: Find in interval log charge amplifier – tagged for 6 months
19. A: Found in log at 6 months. Database - ??? Technician used a capacitor that was scheduled for calibration 7-22-99; used a voltage ??? scheduled for calibration 5-22-99.
20. N: LCR Meter – find in interval log; tagged for 12 months.
20. A: Found in interval log – 12 months. Database – 12 months; used capacitor
21. N: Pressure Gauge – find in interval log; tagged for 12 months
21. A: Found in interval log – 12 months. Database – 12 months; Pressure balance scheduled for calibration 12-7-99
22. N: Scanning thermometer – find in interval log; tagged for 12 months.
22. A: Found in interval log – 12 months. Database – 12 months; multimeter scheduled for calibration 4-7-99
23. N: What if you get a piece of equipment you can't calibrate.
23. A: Advise the user what level the equipment is calibrated to; if acceptable to use. User decides to keep or replace.
24. N: What determines what temperature/humidity the labs are kept.
24. A: Manufacturers specifications on equipment.
25. N: Master gauge block – 36 months
25. A: Interval Log – 36 months.
26. N: Wire gauges – 48 months.
26. A: Interval log – 48 months.
27. N: Where is the stabilization period/dwell time.
27. A: Found in Procedure P11.1

Date: February 24, 1999 Morning Audit
ISO Element(s): 4.14
Auditee Organization Code: HEI/Problem Assessment
Center/Supervisor
Building: 4203

N: What procedure calls out CARs or RCARs?

A: Procedure MSFC-P14.1 and S&MA OWI-CR10-R-12

N: Do you have a copy?

A: He pulls it up on the computer.

N: What does it relate too (S&MA OWI-CR10-R-12)?

A: It relates to the internal working system for the PAC Group. Right now it is in the review process.

N: Do you have a list of currently open RCARs?

A: Yes. He pulls it out and shows him a hardcopy as well as on the computer.

N: He inquires about a NCR that was written previously on the PAC system. How have you developed your consistency in closing this NCR? (he is verify the closure that was submitted as a result of this NCR)

A: We wrote it in the procedure. He shows him on the computer where the system has been corrected to reflect the closure of the NCR.

(the auditee goes to get his software support person to further explain the NCR closure as well as the new/revised software system)

N: What is your job title mama?

A: System Analyst

N: Good let's close this previous NCR.

N: Some of these RCARs are really old.

A: Yes. Let's look at one. He proceeds to pull up a sheet that states just that fact..... RCARs are opened too long. The are delays in closure

N: Since the RCAR was generated, what are you doing in terms of handling such a long delay/response time in closure?

A: I am doing a monthly status. I am implementing tighter surveillance on the system.

N: What procedure talks about time constraints? Show me.

A: He quotes what the procedure says (MSFC P14.1 sec. 4.1.4

N: What is the response status? (he is looking at the list of RCARs that the auditee showed him)

A: He explains

N: What are the different response status'?

A: He explains red, green, and yellow

N: Where is the description of this red, green and yellow codes?

A: He explains that this code is for him as a personal management tool that he uses to encourage him people that he manages.

N: Does anybody else get a copy of this status?

A: It's for me only. I send it out to my engineers to see if they agree with the status.

N: What happens if you decide to leave or retire from the company (i.e. do you have a backup)?

A: I have a back up lead. He knows how to carry on in the event that this happens. Everyone has been trained on the system.

N: At any time, how does anybody else know''

A: You can do a query on the system. He shows him.

N: Let's see R100.

A: He shows him.

They discuss R100

N: Let's look at R91

A: He shows him (it was a hardware problem)

N: very good

N: Let's look at R54

A: Use of the credit card. This was a big labor intensive undertaking. Some discussion ensues amongst N, A, and the escorts.

N: Let's go back to that list (open and closed list)

A: He explains it. (the Aerogel issue)

N: What was the disposition?

A: He explains it via the computer.

Some discussion ensues amongst N, A, and escort

N: It appears that the upgrades were recently?

A: Yes.

N: Let's go back to the list

N: Let's see another closed one R63.

N: What was the original problem?

A: He explains it.

N: What about customer complaints?

A: We have not had any complaints. We have implemented a comment system called the Quality Comment System (positive feedback)

N: What procedure tells you to do this?

A: Procedure MSFC-4.1-C01 (for processing) and C03 (for how to)

A: This is a paper system only.

N: What sort of time frame do you have for these Quality comments?

A: We have not gotten any since Feb or May of 98.

N: How would you grade them?

A: All 10 of them are graded as compliments.

N: Let's look at comment #10. It is from Lewis Research Center.

A: He shows him

N: Is the form numbered? (he is looking @ #9 Quality comment)

A: Yes. He shows him

N: Who is the customer?

A: Boeing

N: He looks at #7.

A: He shows him more comments (data)

N: When do you send out Quality comment sheets?

A: Any time that we send out a product, we send one along with the product/services provided.

N: Looks at Quality comment #8

N: I have no issues.....

N: Who is the MSFC Rep?"

A: S.S

N: QA policy?

A: He tells him

N: Thanks for your time man.....

Date: February 24, 1999 Morning Audit
ISO Element(s): 4.6 continuation from yesterday
Auditee Organization Code: GP31
Building: 4203

This section deals with TBE/Contractor

N: What are your titles?

A: Contracting Officer and Chief of Planning Analysis Review

N: How long has TBE been on the contract?

A: For a long time. I am uncertain of the date. I have been here 27 years and they had the contract even before then. This is not a new contractor.

N: What process of evaluation leads up to the selection of vendors?

A: The Source Evaluation Board

N: What was the old system?

A: Prior to ISO 9000, we have a book with the older data. This data has been folded into our ISO 9000 documents.

N: If a new contractor is awarded, how do you bring them in?

A: The SEB procedure. All of this is laid out there.

N: How do you maintain/monitor your contractor performance?

A: A technical monitor compiles this information and it relayed to our office. The schedule varies by contracts. She shows him on the computer MSFC-P06.1-C05 rev C.

N: Where does it state where they are evaluated (objective evidence)?

A: In the contract.

N: I want to see objective evidence

N: How often is it required that you monitor the contract?

A: We have some one that you can talk too and they will explain the process.

The auditor arranges to go and see that person later on in order to see the objective evidence.

Date: February 24, 1999 Morning Audit
ISO Element(s): 4.13

Auditee Organization Code: CR30
Building: 4205

N: Do you have an area where you keep non conforming products?

A: Yes.

N: Let's see it

A: She shows him

She hands him a copy of open DR report (failed hardware report). She shows him the hardware and the paperwork

N: What kind of storage cabinet is that?

A: MRB hold crib.

N: He looks at open DR #6770

N: What is that number?

A: Answers 6672

N: What procedure?

A: The procedure is in the document.

N: What is your job title?

A: Quality Specialist

N: Who do you do?

A: I inspect incoming and outgoing hardware, testing, shipping, document all DRs on hardware and etc.

A: She brings up the document MSFC P13.1. She explains that there are two ways to document a discrepancy.

N: How do you maintain TDRs (test discrepancy reports)?

A: They stay with the test procedure. A log accompanies the procedure

N: Later let's see some TDRs.

A: OK

N: Let's talk about DR 6770

N: Which block tells you about filling out the form?

A: She shows him the form in MSFC P13.1 while he is holding an actual DR (an open one)

N: Is that the date that it was written on?

A: Yes

N: Who's stamps are those?

A: She explains

N: Looks like the form is filled out correctly. Looks really good.

N: How often do you end up writing DRs?

A: The contractor does his/her own. I review their system. Here on the Center there is not a lot of experiments going on right now, so we do not have very much MRB activity. We are not a production facility.

N: Let's look at the 4 DRs that are opened and closed since the last assessment.

A: OK

N: Where are your records kept?

A: She shows him.

N: Let me see some written and closed DRs less than a year old.

N: He looks at an Aerogel Problem (#6773) it is an open item.

A: She pulls up the CAS system on the computer.

N: Let's see some examples of the Aerogel procedure

A: OK

A: She shows him the TDR log that stays with the procedure MTCP-FC-Aerogel-301

N: Where do they sign when it's closed?

A: She shows him.

N: Do you have another one?

A: Yes.

N: How are they filed?

A: She says by projects

N: Where's the TDR log?

A: She shows him

N: He is viewing a procedure and sees where it is noted that two items were discrepant. Only one write up has been included. There should have been two items referenced in this first Run (MTCP-FC-MPEVESA-302). According to the MSFC-P13.1, the TDR log should follow the test procedure. This is a violation of the procedure MSFC-P13.1 para. 4.3 e

A: You are correct. This was an oversight on my part. I was suppose to place a copy of this item in this TDR. She goes and gets the accompanying Run #2 where the TDR is referenced there also. She states that she was suppose to place a copy of this in Run #1.

N: This will be written up as an observation.

N: He looks at another procedure. Show me the TDR log.

A: OK. She shows him

N: Who is the MSFC Rep?

A: S.S.

N: What is the main point of the QA policy?

A: She tells him

N: Thanks for your time

Date: February 24, 1999 Morning Audit

ISO Element(s): 4.6 continuation

Auditee Organization Code: GP22

Building: 4250

N: What is your title?

A: Contract Specialist

N: For TBE, how often is the contractor evaluated and when was the last evaluation?

A: She shows him the fee structure and tells him that it is based on how the contract is structured.

N: Does TBE have a contract number?

A: vendor code and cage code, yes. She shows him

N: What was the last date?

A: The last mod was 1-26-99

N: When did you sit down with your technical monitor?

A: I am new on this contract. I have only been working it for 3 months. The date listed here was in December. The contract anniversary was Nov. I sat down with the technical monitor, but I did not take any notes from that meeting.

N: Who is your technical monitor?

A: She tells him.

N: Who is the MSFC Rep?

A: S.S.

N: QA policy statement

A: She tells him

N: Thanks for your time.