



## Nadcap Accreditation Case Study



Lei Bao, Vice President of NCS Testing Technology Co., Ltd, and Supplier Support Committee (SSC) Representative for Asia, shares his perspective and experience of Nadcap audits.

**How did you first hear about Nadcap and why did your company decide to pursue Nadcap accreditation in the first place?**

In short, it was a customer, Rolls-Royce, who brought Nadcap to our attention. NCS became Rolls-Royce's Supplier in 2002, providing test services for its joint-venture company in China. In 2004, Rolls-Royce asked NCS to get Nadcap accreditation. Considering the request coming from an important customer as well as the foreseeable potential of the aerospace industry in China at the time, NCS decided to get Nadcap accredited. NCS also made this decision to be part of a high standard industry program.

NCS obtained its first Nadcap accreditation in 2005, becoming the second Nadcap approved third-party metallic testing

laboratory in China. NCS undertook a thorough Nadcap audit preparation and as a result, the whole certification process went well. The efforts paid off and NCS has built successful relationships with numerous customers in the aerospace industry since then.

**“ Diligent audit preparation is key to a successful audit ”**

**How easy is it to find the information you need to help you prepare for a Nadcap audit?**

When NCS first applied for Nadcap, the Nadcap program was at its early stage

in China. As it was the first Nadcap audit conducted at a NCS laboratory, the company faced the challenge to create everything from scratch. The program's development in Asia, along with eAuditNet's constant improvement make the audit preparation much easier nowadays. All supportive materials can be found in eAuditNet and the platform is constantly improving, becoming more and more accessible and friendlier. The quality department of NCS now feels comfortable preparing for Nadcap audits, especially with the help eAuditNet provides.

In recent years, NCS representatives have been attending Nadcap meetings regularly and taking part in Nadcap activities. This enhances our knowledge and understanding of Nadcap operations and changes, including eAuditNet updates. In my opinion, it makes eAuditNet more helpful.

**How long before the actual audit do you start preparing and what do you do to prepare for a Nadcap audit?**

Always listed as an item for top management to review, Nadcap audits are taken seriously at NCS. For every audit, NCS top management takes into consideration the resources needed for the latest Nadcap audit and then allocates the supportive resources for the upcoming audit as appropriate. Then, NCS Quality department kicks off the Nadcap audit preparation, generally six months prior to the actual audit.

Usually, the preparation phase starts by reviewing Nadcap Operating Procedures (OP). We also download and review the latest Audit Criteria (AC) from eAuditNet, and all relevant (new) specifications are then taken into consideration. Depending on whether they were relative changes made to Nadcap Operating Procedures and Audit Criteria, NCS internal procedures may need to be revised. Then a full self-audit, including on-site witness of operations, is conducted. All findings from the self-audit are promptly addressed within a dedicated period of time. At NCS,

we find it easier to break down the different parts of the internal audit and conduct them separately.

Retrospectively, the self-audit tends to last longer than the actual Nadcap actual audit.

In addition, we ensure all self-audit findings and results are concluded early enough as part of the internal audit process to ensure we can submit the self-audit results to eAuditNet within the 30-day deadline. In parallel, other minor "preparation jobs" as we call them, will be performed until the Auditor's arrival.

**How do you find the audit scheduling process?**

In brief, we are comfortable with the audit scheduling process. We have two Nadcap accredited sites, in Beijing and Shanghai, both on the 24-month Merit scheme. We usually go with the audit scheduling arrangement suggested by the PRI staff in the Beijing office. Besides receiving audit scheduling process notification emails, NCS staff periodically logs in to eAuditNet to make sure audits are scheduled as they should be. This process allows us to make sure all the relevant Audit Criteria and slash sheets are included – or to add/remove any items as appropriate. Sometimes we have to discuss with PRI staff to reschedule an upcoming audit to avoid any conflict with national public holidays or other events.

**Do you have much interaction with PRI staff before the Nadcap audit and how is it?**

We tend not to have much interaction with PRI staff before Nadcap audits. However, when we are in touch with them, mostly from the PRI Beijing office, they are always helpful, especially for scheduling matters.

**What did you find was the most challenging during the audit?**

The language barrier is always the biggest challenge for Chinese Suppliers during Nadcap audits. As a side effect, this has already led to miscommunication,

impacting the audit efficiency, and occasionally resulting in unnecessary non-conformances (NCRs).

A Chinese Nadcap Auditor recently joined the program through the MTL Task Group, significantly improving the situation and the MTL Nadcap audit process in China. The language barrier is not only frustrating during Nadcap audits, but also after the audits. I believe PRI Staff Engineers must often be confused by the description of the corrective actions coming from non-native English speaking Auditees in response to NCRs.

Fortunately, PRI Staff Engineers are very experienced and most of the time they can guess the meaning with high accuracy.

**What could be done to improve the experience of going through a Nadcap Audit as well as having an Auditor on site?**

With almost 15 years' experience with the Nadcap program, we think that a good and sufficient preparation is the most important thing that could improve an Auditee's experience of going through a Nadcap audit. Doing so puts the Auditee at ease during the audit process. It also facilitates the audit process, which in turn generates a comfortable environment for both the Auditor and the Auditee.

Thorough preparation includes identifying all the relevant Audit Criteria and related slash sheets your company will be audited against, conducting a thorough self-audit, briefing company personnel about the latest changes related to Nadcap audits, making sure all internal procedures are robust enough and functioning properly per the Nadcap requirements, and more.

A good preparation also covers the on-site operations the Auditor will witness. It sometimes happens that Operators are under increased pressure when the Auditor observes a job audit. This means Operators should be well-prepared for the audit.

Finally, it is best practice to ensure there is a fast and stable Wi-Fi connection within your facilities as the Auditor will need it to perform the audit.

**How does the outcome of the audit and your company performance compare to your expectations?**

Although we find the Nadcap audits and related postaudit actions challenging, especially the Root Cause Corrective Action (RCCA) process, we think that Nadcap audits are always beneficial to our company. They help us improve constantly.

Nadcap accreditation is not easy to acquire, and it requires thorough preparation and diligence to be maintained. However, from our experience, once a Supplier has gone through several Nadcap audits, it becomes a totally different Supplier. After several Nadcap audits, Operators understandingly work to the aerospace industry standards while the quality management system ensures the operations keep going this way.

Aware of the Nadcap accreditation benefits, NCS constantly dedicates a budget to maintaining Nadcap accreditation, acquiring accreditation for new facilities, and taking part in Nadcap activities. It pays off.

**What tools do you find most useful in the RCCA process?**

The RCCA process is crucial in the Nadcap audit process. From our very first Nadcap accreditation, we considered the 5-Why approach to be the most useful tool in the RCCA process. The first time we used the 5-Why tool, PRI Staff Engineers had to guide us step-by-step to keep going further until we got to the actual root cause. We are now more confident in using the 5-Why tool and in applying its concept to similar quality management activities. We still find it challenging to use the 5-Why tool in the RCCA process. However, it is worth the effort every time.

Do you have much interaction with PRI staff after the Nadcap audit and how is it?

The post-audit period tends to be the one when we have the most interaction with PRI staff. We work actively with PRI Staff Engineers to get their guidance on how to best respond to the NCR(s) as part of the RCCA process. Their comments are helpful in avoiding errors and/or invalid responses. At NCS, we generally go through three rounds of responses until all NCRs are closed.

To conclude, I would like to share some thoughts with our peers within the Nadcap Supplier community:

- A good routine to keep your quality management system healthy and robust is to frequently review it and use the documents available on eAuditNet to prepare for your self-audit and actual Nadcap audit. "Once you manage to get on board, remain on board".
- A diligent audit preparation is key to a successful audit and sufficient preparation will facilitate the audit process, which will eventually provide a favorable audit environment.
- Do not hesitate to ask for help from the SSC and PRI staff in general. They are really helpful. Sometimes problems could be solved in a simple way.

## About

NCS Testing Technology Co., Ltd. is one of the biggest materials testing companies in China.

With 66 years' of experience, the company has accumulated significant expertise in the field. NCS is headquartered in Beijing with three branches in Shanghai, Tsingtao, and Chengdu. The Beijing and Shanghai sites are Nadcap Material Testing Laboratories (MTL) accredited, and both branches are on the 24-month Merit scheme.

Besides operating as a testing laboratory, the company is also a calibration services provider, analysis devices manufacturer, reference materials provider, and proficiency testing provider.