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BOILERS AND PRESSURE VESSELS SAFETY  
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## **GUIDELINE FOR NUCLEAR CERTIFICATES OF AUTHORIZATION NUCLEAR SCOPES, LIMITATIONS AND IMPLEMENTATION GUIDE**

The CSA-N285.0 Standard references the ASME Boiler and Pressure Vessel Codes, Section III, Div.1 for all nuclear design, fabrication and quality program requirements with only minor exceptions. As the ASME Codes provide the rules for quality programs, the following information is based on the requirements of the ASME Boiler and Pressure Vessel Codes Section III, Div.1. ASME references are provided to assist the reader in easily referencing the applicable ASME Code requirements.

TSSA Certificate of Authorization applicants should work in close conjunction with the Authorized Nuclear Inspector (ANI) and Authorized Nuclear Inspector Supervisor (ANIS) to ensure that the quality program manual and program implementation are effective and complete prior to scheduling a new or renewal survey.

Changes made to the type of Code activity being performed at a company location after a TSSA Survey will, as a minimum, require a further audit by TSSA staff. In addition, all changes in company locations as well as those involving Code activities such as welding, assembly, stamping, pressure testing, storage, machining and certification will require a new TSSA survey.

### **1. TYPES OF CERTIFICATE**

Before preparing a quality program and applying to TSSA for a survey an applicant must determine the type of work to be undertaken. The following guideline provides a breakdown of the various certificate scopes available from TSSA.

#### **A. DESIGN AND FABRICATION OF COMPONENTS - ASME N Type Scope (NCA-4000)**

Permits construction (design and fabrication) by the applicant of one or more of the following components: vessels, pumps, line valves, piping systems, storage tanks.

##### **Implementation Demonstration**

A demonstration of the whole program is required including a complete fabricated component, to the highest Class requested (Class 1 being the highest), which represents the type of products to be built by the N Type certificate applicant, to the N Type certificate applicant's design, including the prepared final Manufacturer's Data Report Form and all supporting documentation. When multiple shop and field site activities are requested by an applicant, it shall be demonstrated at each shop location and field site. (See 3 - Adding New Location)

If one or more field sites are active and included in the survey, then the scope of the certificate will include field sites licenced by Canadian Nuclear Safety Commission (CNSC). The Manual will further limit activities to field sites where implementation was demonstrated during the survey. (See 3 - Adding New Location)

**Limitations:** Limited to the design and fabrication of specified components in accordance with the certificate scope and such additional detail as described in the accepted Quality Assurance manual, with Manufacturer's Data Reports signed off by an ANI.

**B. ASME N Type Subcontracting Scope (NCA-4000)** – with all fabrication, installation and other activities subcontracted to other Certificate of Authorization Holders.

Permits design of components for which overall responsibility is retained by the design organization and for which all Code fabrication and installation activities are subcontracted to other appropriate Certificate of Authorization Holders. Scopes may list individual components and their class of construction or may identify the Division of the Code for all classes of components within that Division

These are restricted N Type Certificates of Authorization that are issued to engineering organizations who perform design only and do not perform fabrication activities. The certificate scope authorizes construction of components for which overall responsibility is retained by the N Type Subcontracting certificate applicant, and for which all fabrication and installation are subcontracted to other appropriate Certificate of Authorization Holders. As the certificate is for design only it cannot be extended to other Code activities such as Material Supply. If MO activities are required a separate application, demonstration item and certificate will be required.

**Implementation Demonstration**

A demonstration of the whole program is required for the TSSA survey team including a complete fabricated component, to the highest Class requested (Class 1 being the highest), built to the N Type Subcontractor's design by a qualified ASME or TSSA Certificate of Authorization holder, including the prepared final Manufacturer's Data Report Form. The name plate and all supporting documentation by the N Type Subcontractor applicant.

**Limitations:** Limited to design only with all other fabrication, installation and related Code activities performed by other Certificate of Authorization Holders with the appropriate certificate scope, and such additional detail as described in their accepted Quality Assurance manual, with Manufacturer's Data Reports signed off by an ANI.

**C. FABRICATION OF PARTS ONLY (Without Design Responsibility)  
ASME NPT Type Scope (NCA-4000)**

Permits the fabrication of parts, tubular products welded with filler metal, and piping subassemblies by the certificate holder for other certificate holders, without design responsibility for the parts (Design is by other certificate holders).

**Implementation Demonstration**

A demonstration of the complete program is required for the TSSA survey team including a complete fabricated part by applicant to the highest Class requested (Class 1 being the highest), built by the applicant including the prepared final Data Report Form and all supporting documentation.

**Limitations:** Limited to shop fabrication of parts, tubular products welded with filler metal, and piping subassemblies only, with Data Reports signed off by an ANI.

**D. FABRICATION OF PARTS ONLY (With Design Responsibility)  
ASME NPT Type Scope (NCA-4000)**

Permits the fabrication of parts, tubular products welded with filler metal, and piping subassemblies by the certificate holder for other certificate holders, with design responsibility for the parts (Design is included by applicant).

**Implementation Demonstration**

A demonstration of the complete program (including design responsibility) is required for the TSSA survey team a complete fabricated part by the applicant to the highest Class requested (Class 1 being the highest), built by the applicant including the prepared final Data Report Form and all supporting documentation.

**Limitations:** Limited to shop fabrication of parts, tubular products welded with filler metal, and piping subassemblies only, with Data Reports signed off by an ANI.

**E. FABRICATION OF SUPPORTS (May or may not include Design)  
ASME NS Type Scope (NCA-4000)**

Permits the fabrication of welded or non-welded supports with or without design responsibility by the support certificate holder.

**Implementation Demonstration**

A demonstration of the complete program is required for the TSSA survey team, including a complete fabricated support (welded if required in the certificate scope) to the highest Class requested (Class 1 being the highest), built by the NS Type certificate holder, including the prepared final Manufacturer's Welded Support Data Report Form or Certificates of Compliance, as applicable, and all supporting documentation. Design capability shall be described in the Quality Assurance manual and implementation demonstrated if design is requested for the Certificate of Authorization.

**Limitations:** Limited to the design and fabrication of specified welded or non-welded supports as permitted by the certificate scope and such additional detail as described in the accepted Quality Assurance manual. There is no ANI involvement in support design and/or fabrication

**F. MANUFACTURING AND/OR SUPPLYING MATERIAL [MATERIAL ORGANIZATION (MO)]  
ASME QSC Type Scope (NCA-3800)**

Permits the Material Organization to Manufacture and/or Supply Material for sale to others.

MO Type certificate scopes may be for two types of activities, "Manufacturing" and/or "Supplying". With the exception of "Manufacturing of Welding Material". A detailed listing of product forms on

the Certificate will not be provided. The controls that need to be demonstrated are the same for all material with the exception of the manufacture of welding material which requires a separate Certificate of Authorization. NCA-4200 requires the Quality System Manual to define the specific activities included in the scope of work that the Material Organization proposes to perform, including any combination of NCA-4251.2 (a)(1) through (a)(6).

### **Implementation Demonstration**

Material controls shall be fully demonstrated for the TSSA survey team from procurement through testing, certification and the quarantine warehousing of each piece of identified material in secure storage. When testing and examination of material is included in the scope (required for Utilization of Unqualified Source Material), a piece of Class 1 material shall be demonstrated, tested, examined and a Certified Material Test Report (CMTR) shall be provided, all processed in accordance with the program. In addition, when any of the following activities are requested they shall have complete written procedures and checklists available and be fully demonstrated at the time of a TSSA survey:

- “Shipment of Material from Qualified Material Organizations to other parties”
- “Qualification of Non-Certified Material Organizations”
- “Utilization of Unqualified Source Material”
- “Approval and Control of Suppliers”

**Limitations:** Limited to the scope identified in the Certificate of Authorization and the Quality System manual. Further additions to the scope require further review by TSSA. There is no ANI involvement in Material Manufacture or Material Supply.

## **G. MATERIAL ORGANIZATION SCOPE EXTENSION TO N TYPE FABRICATION CERTIFICATES ONLY**

Permits some N Type fabrication certificate holders to perform limited Material Manufacturing and/or Material Supply activities for use of the material in house, or for sale to others, as described in the ASME NCA-4000 Quality Assurance manual and ASME NCA-3800.

The Quality Assurance Manual shall address the additional NCA-3800 specific activities included in the scope of work that the N Type fabrication certificate holder proposes to perform, including the specific scope of activities to be utilized from NCA-4251.2 (a)(1) through (a)(6). In addition, the requirements of NCA-4255.2, 4255.5, 4256.3, 4256.4, NCA-3861, 3862.1, and 3862.2 shall be included in the manual.

This extension is not available to ASME N Type Subcontracting certificate holders qualified to perform design only (See Scope above), where all fabrication is subcontracted to other Certificate of Authorization holders with the appropriate scopes.

### **Implementation Demonstration**

Material controls shall be fully demonstrated for the TSSA survey team from procurement through testing, certification and the quarantine warehousing of each piece of identified material in secure storage. When testing and examination of material is included in the scope (required for Utilization of Unqualified Source Material), a piece of Class 1 material and creation of the CMTR processed in accordance with the program shall be fully demonstrated. In addition, when any of

the following activities are requested they shall have complete written procedures and checklists available and be fully demonstrated at the time of a TSSA survey:

- “Shipment of Material from Qualified Material Organizations to other parties”
- “Qualification of Non-Certified Material Organizations”
- “Utilization of Unqualified Source Material”
- “Approval and Control of Suppliers”

**Limitations:** Limited to the Material Organization scope identified in the Certificate of Authorization and the Quality Assurance manual. Additions to the scope require further review by TSSA. There is no ANI involvement in the Material Manufacture or Material Supply portion of an N Type quality assurance program.

#### H. REPAIR, REPLACEMENT AND MODIFICATION

Permits repair, replacement or modification of nuclear items under a quality assurance program that meets the requirements of ASME Section III, Div. 1, NCA-4000.  
For definition and specific requirements see CSA N285.0-12 Clause 14

Repairs to nuclear pressure relief valves shall, as a minimum, meet the “VR” and other nuclear pressure relief valve repair requirements of the National Board Inspection Code ASME/NB-23.

##### **Implementation Demonstration**

A demonstration of the complete program is required for the TSSA survey team, including a complete repaired or modified item to the highest Class requested (Class 1 being the highest), to be fabricated by the certificate holder, including the prepared final Manufacturer’s repair, replacement or modification Data Report, as applicable, and all supporting documentation. Design capability for modifications shall be described in the Quality Assurance manual and implementation demonstrated if modification is requested for the Certificate of Authorization. Repair authorization does not require design capability as the existing plant design from the licensee applies. When activities at multiple shop and field sites was requested by applicant; demonstration of implementation shall be performed at each location. (See 3 - Adding New Location)

If one or more field sites are active and it was included in the survey, then the scope of the certificate will include field sites licenced by CNSC. Manual will further limit activities to field sites where implementation was demonstrated during survey. For adding new field sites. (See 3 - Adding New Location)

**Limitations:** Limited to the scope identified in the Certificate of Authorization and the Quality System manual. Further additions to the scope require further review by TSSA.

## 2. ADDING NEW TYPE OF CERTIFICATE (during the Tri-annual period)

All changes in company Scope of Code activities such as adding additional certification for example NPT, NA, NS, MO etc. will require a new TSSA survey at each location along with a new Application. (See 10 – Fees)

### Implementation Demonstration

A demonstration of the added new type of certificate program is required to the TSSA survey team to include all additional requirements not previously demonstrated to the highest Class requested (Class 1 being the highest). Demonstration shall include the preparation of the Data Report Form and all supporting documentation by the certificate holder at each location (field and shop) listed on the certificate and in manual.

**Limitations:** Limited to the scope identified in the Certificate of Authorization and the Quality System manual. Further additions to the scope require further review by TSSA.

## 3. ADDING NEW LOCATION TO EXISTING SCOPE

### a) Field sites are included in the certificate, but specific site is not listed in manual

For field sites licensed by CNSC that are not listed and/or active at the time of the TSSA survey, a separate implementation demonstration of the scope related activity shall be required at each nuclear site (CNSC approved site) and shall be further audited by the TSSA team prior to performing code activities at the site. At the conclusion of the Audit, a revised manual for field scope of activity has to be accepted by the Authorized Nuclear Inspector Supervisor.

### Implementation Demonstration

If the field site licensed by CNSC is not active at the time of TSSA's original survey, an additional implementation demonstration of scope related activity shall be required at each nuclear site (CNSC approved site) to the highest Class requested (Class 1 being the highest), built to the N, NPT, NA, NS Type which ever applicable. For all other Non CNSC field site, a separate implementation demonstration of scope related activity shall be required at each Non CNSC field sites during original survey. A separate fee will be charged for any CNSC approved site survey or Non CNSC field site survey based on hourly charge for all Team members. (See 10 – Fees)

### b) Certificate do not include field sites

If field sites were not included at the time of TSSA original survey, a separate implementation demonstration of scope related activity shall be required at each nuclear field site and shall be further surveyed by the TSSA Audit team, a revision manual for field scope of activity must be accepted by the ANIS.

### Implementation Demonstration

A full demonstration will be required to the TSSA Audit team. If multiple field locations are involved, a separate implementation demonstration of scope related activity shall be required at each nuclear field sites to the highest Class requested (Class 1 being the highest), built to the N, NPT, NA, NS Type which ever applicable.

#### 4. PREPARING THE QUALITY PROGRAM (See Attachment 1 & 2 below)

Write and implement a quality program manual with referenced procedures based upon the type of Certificate(s) of Authorization to be applied for:

- a) For N Type, and repair, replacement or modification certificates the written manual and procedures shall meet the requirements of CSA-N285.0, ASME Section III, Div. 1, NCA-4000, NQA-1 and the referenced documents.
- b) All locations where procurement, quality assurance and/or engineering activities are being controlled, managed and administered shall be described in the quality program manual and shall be surveyed by a TSSA Survey Team.
- c) For Material Organizations the written manual and procedures shall meet the requirements of CSA-N285.0, ASME Section III, Div. 1, NCA-3800 and the referenced documents in that Code section.
- d) For a Material Organization Scope Extension to N Type certificates that are permitted to include some portion of Material Manufacture or Material Supply, the written manual and procedures shall also include the additional requirements of NCA-3800 that are not addressed by NCA-4000 (See Step 1 above). Each shop location street address for nuclear Material Supply or Material Manufacture including material warehousing, secure storage, and quarantine capabilities. The addition of each of the following activities shall be individually documented in the manual with implementation of the controls satisfactorily demonstrated by the applicant, before they can be included in a certificate.; "Shipment of Material from Qualified Material Organizations to other parties"; "Qualification of Non-Certified Material Organizations"; "Utilization of Unqualified Source Material"; "Approval and Control of Suppliers"
- e) Subcontracted activities may be permissible. Each subcontracted activity shall be clearly described in the quality program manual, separate from those for in-house personnel, and shall include the required responsibilities and controls to be applied to the subcontractor by the applicant.

After writing the quality program manual and procedures, train all of the applicable staff in the use of all of those documents. Verify that all of the required training for company staff is complete to ensure the program is fully implemented.

Perform internal and external audits of all activities and suppliers described in the written program manual to ensure the program is correctly implemented and working as described. Complete corrective actions on all identified program deficiencies. Ensure that all audit records are available for the TSSA survey team.

Work with the TSSA assigned ANI and ANIS during this process to ensure that they are aware of progress during the preparation of the quality program and can provide support where necessary. On completion of the program preparation implementation by the applicant, the written quality program manual shall be provided to the ANIS for review and acceptance by signing the manual.



## 5. APPLY TO TSSA FOR THE SURVEY

Once you are satisfied that the quality program is fully implemented, use the application form and complete the applicable checklist(s) from the Boilers and Pressure Vessels section of the website at [www.tssa.org](http://www.tssa.org) to make the application. Ensure that the application is complete prior to submission to TSSA.

*Please Show each location street address for which a nuclear construction, fabrication, repair, replacement or modification Certificate of Authorization is requested (e.g. N, NPT, NA, NS type certificates, including "N Subcontracting" type), Also Include all supporting location addresses where procurement, QA and/or engineering activities are being controlled, managed and administered; including those support activities performed at sites other than the main certificate holder location street address. Upon receiving application TSSA will send you quote. For businesses outside of Ontario, a quote will be provided once the application is received and pre-payment in the full amount of quote is required prior to scheduling survey.*

At least one (1) week prior to the survey uncontrolled copies (4 sets) of the manual & referenced procedures shall be send to TSSA. The Quality Assurance program manual shall be signed by the ANIS and shall cover the scope as requested in the application form.

For Business outside of Ontario it is required to have active Service Agreement with Authorized Inspection Agency (AIA). They will be responsible to schedule ANI & ANIS for duration of survey and all cost of ANI, ANIS & AIA Services will be responsibilities of applicant.

## 6. DEMONSTRATION OF ITEM DURING SURVEY

A demonstration of the whole program is required including a fabricated component, to the highest Class requested (Class 1 being the highest), which represents the type of products to be built by the N Type certificate applicant's design, including the prepared final Manufacturer's Data Report Form and all supporting documentation. When multiple shop activities are requested by an applicant, it shall be demonstrated at each shop and field shop location. When shop and field activities are requested by an applicant, both shall be separately demonstrated at each location.

For surveys, implementation demonstration of the complete program may be on production work in progress for only renewal of certificate but for new application it is not feasible to use production work as a demonstration item, or items. Multiple certificate applications may require for more than one demonstration item.

## 7. THE TSSA IMPLEMENTATION SURVEY

A TSSA survey team will perform the implementation survey, as a minimum it will be comprised of the ANI, ANIS and two TSSA quality program surveyors; except for a Material Organization survey (NCA-3800) where the ANI is not required to be involved.

The survey will consist of:

- A quality program manual review
- An entrance meeting with the applicant's staff at the main shop location
- The implementation survey of the program at each shop or field site location requested



- An exit meeting with the applicant's staff at the main location on survey completion

A typical nuclear survey takes a minimum of four days for a single shop location including manual review. More time and/or a larger team may be required for multiple locations, large sites, complex programs, etc.

On the first day of the survey, the TSSA survey team will meet to review and understand the manual, typically this will be done at a site which is remote from the shop or field location. This is to ensure, as a minimum,

- a) The manual is reviewed for completeness to CSA/ASME Code requirements and any revisions found to be necessary are agreed to by the survey team.
- b) The TSSA survey team has a good understanding of the written program (Staff titles, control activities, forms used, etc.) prior to starting the survey.

The following days are spent by the TSSA survey team at the shop and/or field site location(s) identified by the applicant for a complete demonstration of the quality program implementation.

## 8. TSSA SURVEY COMPLETION

On completion of the survey, the TSSA survey team will meet with the applicant to advise the findings of the team. Possible findings are:

- Accept
- Reject
- Follow up required

When the decision is Accept, the survey team will make a recommendation to TSSA for issue of a Certificate of Authorization. This recommendation may differ from the original application based on findings observed during the survey.

When the decision is Reject this means that the survey team found too many significant deficiencies to accept the program as being fully implemented. After corrective action has been completed by the applicant, a further survey at a future date will be required before a certificate can be issued.

Follow up required means that further action is required by the applicant to address identified deficiencies observed during the survey, in a specified time frame (typically 30 days) before a TSSA Certificate of Authorization can be issued. This will be discussed and agreed to by the TSSA survey team and applicant at the exit meeting.

## 9. SURVEY FOLLOW UP (When required)

Where follow up is identified by the TSSA survey team as being required, the follow up may be performed by the ANI, ANIS or the Team Leader, as determined by the TSSA survey team at the time of the survey exit meeting.

Upon acceptable documented completion of follow up submitted to the TSSA Team Leader from the assigned individual(s) a TSSA Certificate of Authorization may be issued. The commencement date of the certificate will be from the date of the survey (not from the date of completion of the follow up).

## 10. FEES

### Fee Guide:

- 1) Total Survey charges will include the survey fee amount plus the applicable hourly billing at the current inspection rate as outlined in the Boilers and Pressure Vessels Fee Schedule. Upon receipt of the application TSSA will forward quote outlining all additional costs. For Ontario based businesses a cheque in amount of survey fee should be attached to application. For businesses outside of Ontario, a quote will be provided once the application is received and pre-payment in the full amount of quote is required prior to scheduling survey.

***Please see details noted in the Application Form for a CSA N285.0 Certificate of Authorization of Nuclear Components / Metallic Material Organization for Ontario based businesses and for outside Ontario based businesses.***

- 2) Travel, hotels, meals and other expenses as applicable for all TSSA Team Members will be separately charged.
- 3) Any Extra time for team member due to additional location and follow-ups will be billed per quoted inspection rate.
- 4) Time for Pre-survey is not included and will be billed separately per current inspection rate.
- 5) The following activities related to the Survey such as: Quality Manual reviews and/or pre-reviews, meetings and/or consultations, pre-survey inspections (and/or site visits), and post-survey follow-ups (site visits and/or document review) will be billed at the quoted inspection rate.
- 6) Time in excess of 8 hours per day will be billed at the overtime rate (1.5 times quoted hourly inspection rate) per TSSA Team Member.
- 7) Certificates of Authorization will be invoiced at a cost of **\$94.00 per certificate**, upon completion of a successful Survey
- 8) \*13% HST is applicable to the Survey fee, hourly inspections billing, and cancellation / postponement fees.
- 9) Applications for each of the following certificate programs requires a separate quality program implementation demonstration, on a demonstration item or production work in progress, to show all aspects of the program applied for, in current operation to a TSSA survey team. **Applicants should ensure that the written program is accepted by Authorized Nuclear Inspector Supervisor & fully implemented at each location before requesting TSSA to perform a survey.**
  - a) Each location street address for which a nuclear construction or fabrication Certificate of Authorization is requested (e.g. N, NV, NPT, NA, NS type certificates, including "N Subcontracting" type)

- b) All supporting location addresses where procurement, QA and/or engineering activities are being controlled, managed and administered; including those support activities performed at sites other than the main certificate holder location street address.
- c) Field Site location implementation demonstration at locations remote from any other shop location street address in (a) above when “Field installation at nuclear sites certified by TSSA” is requested by the applicant for the Certificate of Authorization.
- d) For each shop location street address that wishes to include nuclear Material Supply or Material Manufacture including material warehousing, secure storage, and quarantine capabilities; the addition of each of the following activities shall be individually documented in the manual with implementation of the program controls satisfactorily demonstrated by the applicant, before they can be included in a certificate:
  - “Shipment of Material from Qualified Material Organizations to other parties”;
  - “Qualification of Non-Certified Material Organizations”;
  - “Utilization of Unqualified Source Material”;
  - “Approval and Control of Suppliers”
- e) For field locations not active at the time of a TSSA survey, an additional site visit and implementation demonstration is required. TSSA shall be contacted for a certification audit immediately upon commencing work at each such location.
- f) For NCA-4000 program, please use Application form for Nuclear components.
- g) For NCA-3800 program, please use Application form for Metallic Material Organization.

## 11. CERTIFICATE RENEWAL

Renewal of an existing certificate follows the same process as described above, except as noted in 4 - Preparing the Quality Program, the manual and procedures already exist. All other activities, including the provision of a demonstration item(s) for program implementation, are the same as described in this document. All records of previous work performed shall be available for review by the ANI and ANIS at any time, as well as by the TSSA survey team at the time of a renewal survey. This includes all records of activities such as training, staff qualification, annual internal audits and external audits of suppliers during the period that an existing or previous certificate was in force.

**Note:**

**The quality program shall be maintained always during the period that a TSSA Certificate of Authorization is in force. Failure to perform and document all the quality program activities, including the Code required annual internal audits, is cause for the TSSA survey team to reject an application at the time of a renewal survey and refuse to renew an existing certificate.**

**A lack of work during the period of validity of a TSSA Certificate of Authorization is not justification to ignore the regular program maintenance and annual audit requirements of the Code and the written quality program manual.**

## 12. Ontario ASME Certificate holders

For ASME Nuclear certificate holders with TSSA Service Agreements, ANI & ANIS during ASME Survey or immediately after will review manual for all applicable CSA-N285.0 requirements. After receiving ASME Certificate and subject to a successful review of CSA-N285.0 requirements the TSSA certificate with the same scope will be issued. If the scope of the CSA-N285.0 certificate scope is broader than the ASME scope; an additional demonstration of implementation may be required. If additional CSA-N285.0 sites are included which are not covered by ASME Certificate, then an additional demonstration will be required at each location. Fee charges for CSA-N285.0 certification for additional sites and additional scope will be per quoted at the hourly inspection rate.

**For more information, please call TSSA at 416-734-3585 or email: [bpvcustomerservice@tssa.org](mailto:bpvcustomerservice@tssa.org)**

### REFERENCE DOCUMENTS

CSA-N285.0 Latest edition.  
ASME Section III, Division 1 [latest edition, see NCA-1140(g)].  
NQA-1 Edition referenced by ASME Section III, Div.1, NCA  
ASME/NB-23 National Board Inspection Code

### APPLICATION FORMS

CSA N285 0 Certificate of Authorization for Nuclear Components - OUTSIDE ONTARIO  
CSA N285 0 Certificate of Authorization for Nuclear Components - ONTARIO  
CSA N285 0 Certificate of Authorization for Metallic Material Organizations - OUTSIDE ONTARIO  
CSA N285 0 Certificate of Authorization for Metallic Material Organizations - ONTARIO

**ATTACHMENT 1**

**NUCLEAR (“N” TYPE) QUALITY ASSURANCE PROGRAM PREPARATION GUIDE**

ITEM	DESCRIPTION
<b>Code Books</b>	Applicant shall have all the required Code Books (e.g. CSA, ASME, ANSI, etc.) to the correct Edition and Addenda required to perform the work.
<b>Prepare the Quality Assurance (QA) Manual</b>	Applicant writes the QA manual using, as applicable, CSA-N285.0, ASME NCA-4000 and NQA-1 for the manual requirements. TSSA Supervisor reviews the manual in detail and accepts the manual in writing (by signature and date).
<b>Prepare all Applicable Procedures</b>	Applicant writes all procedures per the document control section of the QA manual e.g. design, purchasing, inspection & test, welding, NDE, etc. as applicable. Note: All NDE procedures shall be demonstrated to the satisfaction of the ANI and be accepted by the ANI (sign and date) as well as the applicant, before being used on production work.
<b>Qualify the Registered Professional Engineer (RPE)</b>	Applicant qualifies the RPE per ASME Sec III, Div.1, Appendix XXIII, and places all records on file per the QA Manual. If the RPE is an external service provider, must also be audited and added to the approved vendor list.
<b>Qualify the Lead Auditor and other Auditors, if applicable</b>	Applicant qualifies and certifies a Lead Auditor per the QA Manual and NQA-1. If the Lead Auditor is an external service provider, the person shall be qualified, certified and added to the approved vendor list. Written examination questions and results shall be on file (ASME Interpretation states examination must be written).
<b>Qualify Inspection &amp; Test (including NDE) Personnel</b>	Applicant qualifies all Inspection & Test Personnel per the QA Manual and NQA-1 and issues a certificate of qualification for each one.
<b>Train all staff identified in the QA Manual Training Matrix</b>	Applicant ensures that all staff identified in accordance with the QA Manual organization chart and training matrix receive the required training, including sign-off sheets with topics covered, for each training session.
<b>Audit all Suppliers and create “Approved Vendor Listing” or similar document</b>	Applicant shall survey suppliers for ALL products and services required, except when the supplier holds a relevant TSSA, ASME “QSC” or “N” type certificate (NVLAP/ISO for calibration laboratories). The Approved Vendor List shall show the full scope of supply permitted. ALL surveys require a survey plan, attendance sheet, checklist and survey report per NQA-1. All survey documentation shall be on file.
<b>Implement the QA program</b>	Applicant starts using the whole QA program to ensure that all implementation requirements are met.
<b>Prepare Inspection checklists</b>	Applicant prepares all required inspection checklists for the demonstration item (NCA-4134.8, 4134.9, 4134.10), including all ANI Hold points.

**ATTACHMENT 1**

**NUCLEAR (“N” TYPE) QUALITY ASSURANCE PROGRAM PREPARATION GUIDE – Cont’d**

ITEM	DESCRIPTION
<b>Prepare Implementation Demonstration Item(s)</b>	Applicant prepares demonstration item(s) at each location, using nuclear material for each scope requested, also prepares Manufacturer’s Data Report(s) to the highest level of qualification requested by the applicant (e.g. Class 3 cannot be used to demonstrate Class 1 requirements). Applicant also involves the ANI for Design Specification and inspection checklist acceptance before starting fabrication. Material Organization certification if requested, shall be fully demonstrated from receipt to completion of all tests and issue of the Certified Material Test Report.
<b>Applicant Audits the Program Implementation</b>	Applicant arranges for implementation audits of all program areas, at all locations applied for, prior to the TSSA Certificate of Authorization survey. Corrects all problems identified by these audits prior to the survey, as described in the QA Manual. Makes all audit records available to TSSA. For certificate renewals each year’s annual audits shall be performed and available for the TSSA survey team.
<b>Revise QA Manual or Procedures as necessary</b>	Applicant ensures that all documents or activities are corrected, where audits identify areas requiring corrective action.
<b>Applicant Re-Audits as necessary</b>	Applicant arranges re- audits of areas where corrections were required to ensure corrective action is effective. Ensures that all audit documents are available for the TSSA survey team.
<b>Request Certificate of Authorization survey</b>	When the program is fully implemented, the applicant requests the Certificate of Authorization survey from TSSA or ASME, as applicable.

**ATTACHMENT 2**

**MATERIAL ORGANIZATION QUALITY SYSTEM PROGRAM PREPARATION GUIDE**

ITEM	DESCRIPTION
<b>Code Books</b>	Applicant shall have all the required Code Books (e.g. CSA, ASME, ANSI, etc.) to the correct Edition and Addenda required to perform the work.
<b>Prepare the Quality System Manual</b>	Applicant writes the QA manual using, as applicable, ASME NCA-3800, NX-2000 and CSA-N285.0 for the manual requirements. TSSA ANIS reviews manual in detail and accepts manual in writing (by signature and date).
<b>Prepare all Applicable Procedures</b>	Applicant writes all procedures per the document control section of the QA manual e.g. purchasing, inspection & test, NDE, etc.
<b>Qualify the Lead Auditor and other Auditors, if applicable</b>	Applicant qualifies and certifies the Auditor(s) per the QA Manual and NCA-3800. If the Auditor is an external service provider, must also be audited and added to the approved vendor list. All training and written examination questions and results shall be on file
<b>Qualify Inspection &amp; Test Personnel (including NDE personnel)</b>	Applicant qualifies all Inspection & Test Personnel per the QA Manual and NCA-3800 and issues certificates of qualification. ANIS verifies qualifications prior to survey
<b>Audit all Suppliers and create “Approved Vendor Listing” or similar document</b>	Applicant shall audit suppliers for ALL products and services required, except when the supplier holds a relevant TSSA, ASME “QSC” or “N” type certificate (NVLAP/ISO may be acceptable for calibration laboratories). The Approved Vendor List shall show the full scope of supply permitted for each supplier. ALL audits require an audit plan, attendance sheet, checklist and audit report. All audit documentation shall be on file.
<b>Train all staff identified in the QA Manual Training Matrix</b>	Applicant ensures that all staff identified in accordance with the QA Manual training matrices receive required training including sign-off sheets for each training session.
<b>Implement the QA program</b>	Applicant starts using the whole QA program to ensure that all requirements are met.
<b>Prepare Inspection checklists</b>	Applicant prepares all required inspection checklists for the demonstration item(s).
<b>Prepare Implementation Demonstration Item(s)</b>	Applicant prepares demonstration item(s) using nuclear material, also prepares covering documentation (e.g. CMTR, Cert. of Compliance). Unqualified source material, if included, shall be fully demonstrated, from material receipt to completion of all tests and issue of the Certified Material Test Report.



**ATTACHMENT 2**

**MATERIAL ORGANIZATION QUALITY SYSTEM PROGRAM PREPARATION GUIDE**

ITEM	DESCRIPTION
<b>Applicant Audits the Program Implementation</b>	Applicant arranges for implementation audits of all program areas prior to Certificate of Authorization survey. Correct all problems identified by the audits prior to the survey, as described in the QA Manual. For certificate renewals, each year's annual program audits shall be performed and available for the TSSA survey team.
<b>Revise QA Manual or Procedures as necessary</b>	Applicant ensures that all documents or activities are corrected, where audits identify areas requiring corrective action.
<b>Applicant Re-audits as necessary</b>	Applicant arranges re-audits of areas where corrections were required to ensure corrective action is effective. Ensures that all audit documents are available for the survey team.
<b>Request Certificate of Authorization survey</b>	When the program is fully implemented applicant requests the Certificate of Authorization survey from TSSA or ASME, as applicable.