UL Solutions Qualified Sprayed Fire-Resistive Material (SFRM) Contractor Program -

Contractor Management System (MS) Checklist

UL Solutions

Global Field Engineering

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1.0 Introduction

This Management System (MS) Checklist is based on the requirements found in UL Solutions Qualified SFRM Contractor Program Requirements. This checklist can be used by your organization as a tool to help determine the organization's overall ability to comply with the Qualified SFRM Program Requirements.

The questions found in this checklist provide an example of the types of questions that may be asked during an audit of your Management System (MS); however, they are not all inclusive of questions that may be asked by UL Solutions during the audit. Therefore, in addition to the questions found in this checklist, it is recommended that your organization develop their own questions to determine the level of compliance with the Program Requirements and identify any gaps to be addressed prior to the UL Solutions audit.

2.0 Scope

The use of this checklist applies to UL Solutions Qualified SFRM Contractor Program.

3.0 Definitions

Refer to the Qualified SFRM Contractor Program Requirements.

4.0 Applicable Documents

Doc. #	Title
Client/Customer Support Guidance-ULID-000134	Qualified SFRM Contractor Program Requirements

5.0 Checklist Questions

5.1 Management System Manual

Overview – Your organization shall have a Management System Manual that includes or refers to the procedures established for the Management System and a description of the interaction between the processes of the Management System.

The manual shall describe the scope of the management system to comply with the UL Solutions Contractor Program Requirements.

Questions:
Management System Manual - Does your organization have a documented manual?
Scope – Is the scope of the Management System described in the manual and is the intent to comply with the UL Contractor Program Requirements?
Exclusion – Are there any exclusions from the UL Contractor Program Requirements?

5.2 Project Design, Construction Document Requirements and Review

Overview – Your organization should have defined processes for communicating effectively with customers. The process should provide your organization with a complete understanding of the needs and expectations of the customer so that this information can be translated into specific product and process installation requirements. This includes a review of construction documents (building code requirements, regulatory requirements, architectural drawings, structural drawings, project specifications as applicable for the project), project scope, applicable UL Solutions designs to determine the type of product or products to be used, the fire resistive design specified for the project, to identify any inconsistencies, and to adequately define and understand all requirements.

Appropriate UL Solutions Classified SFRMs and UL designs shall be chosen to meet the construction documents and requirements of the AHJ. This process shall determine that the system meets the specifications and shall include the steps taken when the system does not cover all the building elements in the specifications. Specific processes shall be defined and implemented, and record of this review maintained to:

1. Review the specifications to determine if the design professional has chosen the appropriate UL Solutions Fire Resistance Design to meet the customer specification. Design deviations or missing designs shall be noted to the design professional for correction. The contractor will submit suggested UL Solutions Designs to the design professional for approval.
2. Determine if the project was designed using restrained or unrestrained criteria.
3. Identify any statutory, building code, and/or regulatory requirements related to the installation.

Question	Yes	No
1. Defined Process - Does your organization have a defined process for determining and reviewing the requirements specified by the customer?	☐	☐
2. Actual Practice - Through a review of records and actual process observation, is your organization following the defined process?	☐	☐
3. Contract/Project Review - Does the review ensure that all product requirements are defined including:		
a. Customer specified requirements	☐	☐
b. Project specifications	☐	☐
c. Fire resistive designs	☐	☐
d. Construction documents	☐	☐
e. Any additional requirements as applicable	☐	☐
4. Differences/Conflicting Requirements- Does the review ensure that all differences or inconsistencies are resolved (in writing) prior to acceptance?	☐	☐
5. Codes - Does the review ensure that applicable statutory, regulatory and building code requirements related to the installation are identified?	☐	☐
6. UL Solutions Classified SFRMs/UL Designs - Does the review ensure that the appropriate UL Solutions design is chosen to meet the customer's specifications and clearly identify the steps taken when the design does not address all building elements in the customer's specifications?	☐	☐
7. Restrained vs. Unrestrained – Does the review determine if project was designed using restrained or unrestrained criteria?	☐	☐
8. Qualified Reviewer - Is the review conducted by qualified individual(s), particularly about the determination of the appropriate UL design chosen to meet customer specifications?	☐	☐
9. Records - Are records of the results of the review including any actions arising from the review maintained?	☐	☐
10. Changes - Where product requirements are changed does the organization ensure that relevant documents are amended, and the changes communicated to relevant parties including the customer?	☐	☐

5.3 Procurement of Materials

Overview – Your organization should have a defined process for verifying that purchased product conforms to specified requirements. In general, the type and extent of control applied to the supplier of the purchased product is dependent upon the effect of this product on the organization's final product.

The process should include an evaluation of suppliers based on their ability to supply products in accordance with the requirements. This includes establishing the criteria for selection, evaluation and re-evaluation of suppliers. Records of the results of these evaluations and any necessary actions should be maintained.

The process should also include detailed communication between your organization and the supplier regarding purchased product requirements so that the supplier has every opportunity to deliver a product that meets requirements. This communication can take many forms, including electronic linkage to optimize the accuracy and efficiency of the information and communication.

A record of all materials purchased for each project shall be maintained. These records should include the manufacturer and supplier name, product name, product type, production location, production date, approval agency product label and quantity. Finally, the process shall include verification of purchased product (audit or other activities) to provide evidence that the purchased product meets specified requirements for each project.

Question	Yes	No
1. Defined Process - Does your organization have a defined process to ensure purchased product conforms to specified requirements?	☐	☐
2. Actual Practice - Utilizing a review of records and interviews, is your organization following their defined process?	☐	☐
3. Evaluation of Suppliers – Has your organization established the criteria for selecting suppliers and does it include an evaluation/re-evaluation of suppliers with supporting documents?	☐	☐
4. Purchasing Information/Documents – Do purchasing documents (purchase orders, specifications, drawings) describe the product to be purchased, ensure the adequacy of the information prior to communication, and include the following where applicable:	☐	☐
a. Product specifications, product identification/traceability and any requirements for approval of product (source verification), processes or equipment?	☐	☐
b. Certification Body requirements?	☐	☐
c. Requirements for qualification of personnel?	☐	☐
d. Quality management system requirements?	☐	☐
5. Verification of Purchased Product – Has the organization established and implemented audit or other activities to ensure that purchased product meets specified requirements including the following as applicable:		
a. Certificates of Conformity or Certificates of Analysis that clearly identify the product (drawing/specification revisions), quantity, date and authorization by the supplier including any CB traceability requirements?	☐	☐
b. When product does not meet requirements, is it identified and controlled to prevent its unintended use?	☐	☐

5.4 Storage, Handling, Packaging, Preservation and Delivery

Overview – Your organization should have a defined process for the labeling, storage, handling, packaging, preservation and delivery of materials to prevent misuse, contamination, damage and deterioration. Storage conditions and shelf life must be considered to prevent deterioration of materials. This requirement extends to the jobsite.

	Question	Yes	No
1.	Defined Process - Does your organization have a defined process for labeling, storage, handling, packaging, preservation and delivery of materials to prevent misuse, contamination, damage and deterioration?	☐	☐
2.	Jobsite – Do the process and requirements extend to the jobsite?	☐	☐
3.	Actual Practice - Through a review of records, interviews and actual practice observations, is your organization following defined process?	☐	☐
4.	Identification - Does the process ensure that all materials are adequately labeled or identified with manufacturer name, product name, etc.?	☐	☐
5.	Handling - Do handling methods prevent damage and contamination of materials?	☐	☐
6.	Storage - Are materials stored to prevent damage, contamination and deterioration?	☐	☐
7.	Shelf Life - Are controls in place to ensure that material with a shelf life is used within the specified timeframe prior or otherwise removed and/or tested to determine usability?	☐	☐
8.	Delivery -Does the system ensure the protection of materials during delivery to, and storage at the jobsite?	☐	☐

5.5 Installation, Application and Field Quality Assurance Procedures

Overview – Your organization shall plan and carry out installation and application of SFRM materials under controlled conditions. These controlled conditions include defined processes for availability of information describing the product characteristics, availability of work instructions, suitable equipment, monitoring and measurement of the process and product, availability and use of monitoring and measuring devices, control of nonconforming product, product identification and traceability, adequate resources (equipment and qualified personnel), and preservation of the product.

Your organization shall use the NFCA 100, NFCA 200, NFCA-Quality Management Systems for SFRM Contractors and any other applicable industry documents as a guide in developing field installation and application procedures.

Records of all field tests shall be maintained showing their results (pass or fail) and any actions taken to resolve nonconformities and comply with the fire resistive design requirements.

	Question	Yes	No
1.	Defined Processes - Does your organization have defined processes for the installation and application of materials and UL Solutions designs?	☐	☐
2.	Actual Practice - Through a review of records and actual process observation is your organization following your defined processes?	☐	☐
3.	Procedures – Are field application procedures developed based on industry guidelines (NFCA)?	☐	☐

Question		Yes	No
4.	Controlled Conditions – Are installation and application activities carried out under controlled conditions, including as applicable:		
	a. Availability of information describing product characteristics (drawings, specifications, bill of materials) and manufacturer's instructions/specifications?	☐	☐
	a. Availability and use of work instructions, manufacturer's specification/instructions and other applicable documents, which are up-to date, the most current version available?	☐	☐
	b. Use of suitable equipment including equipment recommended by the manufacturers of SFRM materials?	☐	☐
	c. Availability and use of monitoring and measuring equipment?	☐	☐
	d. Procedures to ensure the application environment is prepared and maintained according to industry guidelines?	☐	☐
	e. Procedures to ensure the surfaces of structural substrates are of an acceptable quality to allow for adequate adhesion of SFRM materials to the structure?	☐	☐
	f. Procedures to protect materials from damage during the curing process?	☐	☐
	g. Procedures to ensure any patching or repair are carried out in such a way to maintain the Listed Design requirements?	☐	☐
5.	Identification – Has the organization identified product throughout the installation and application process as appropriate and does this identification include product status (pass, fail, non-conforming, etc.)?	☐	☐
6.	Traceability – When required, does the organization control and record unique identification of product including traceability of material used?	☐	☐
7.	Monitoring and Measurement – Does the organization: carry out all required tests and audits?	☐	☐
8.	Monitoring and Measurement Devices – Are audits or tests conducted with calibrated equipment when applicable?	☐	☐
9.	Preservation of Product – Is material and product preserved during delivery, installation and application through controlled conditions related to identification, handling, packaging, storage and protection of product?	☐	☐
10.	Installation Personnel – Do installation and application personnel understand their responsibilities regarding following process requirements and ensuring product meets specified requirements including safety? Do they understand what action is to be taken if a nonconformance is detected with the process, product or equipment?	☐	☐

5.6 Audit, Testing and Calibration

Overview – Your organization shall determine the appropriate audit and/or testing to be undertaken at your facility and at the on-site installation of SFRM materials.

Your organization shall define and implement effective and efficient audit, test and calibration processes, including methods and devices for verification and validation of products and processes to verify that the installation conforms to construction document requirements and complies with architectural, code, AHJ and customer requirements. To provide confidence in the data, the Organization shall select devices that are suitable for the tests and measurements being performed (capability, range and accuracy, etc.) and are maintained and calibrated. In addition, your organization shall assess and record the validity of previous measurement results when the devices are found not to conform to requirements.

Audit reports shall be retained with project records and include corrective actions taken to resolve any nonconformities because of audits or tests.

This may include but is not limited to in-process audits performed at the time of installation by the Organization, Installer or third-party audit service providers. In addition, destructive examination of SFRM can be performed as well as destructive tests performed on SFRM mock-ups or test samples.

Your organization shall consult the applicable American Society of Testing and Materials (ASTM) Standards or applicable Building Code to determine the audit intervals with the appropriate agencies, such as special audit agencies for SFRM, the Building Code official or designee, or the like. Guidelines for determining intervals of field tests after application of SFRMs are referenced in the International Building Code.

Question		Yes	No
a.	Monitoring and Measuring – Has your organization undertaken monitoring and measuring activities and provided the monitoring and measuring devices which provides evidence that product conforms to specified requirements?	☐	☐
b.	Field Audits / Tests – Has your organization ensured that appropriate field audits and tests are conducted at required intervals as specified in applicable guidelines and standards. (e.g., NFCA, ASTM and Local, National or International Building Codes)?	☐	☐
c.	Monitoring and Measuring Devices – Where necessary to ensure valid results are monitoring and measuring devices:		
	a. Calibrated or verified at specified intervals, or prior to use against standards traceable to international or national standards and are records of the results of such calibrations maintained?	☐	☐
	b. Adjusted or re-adjusted as necessary?	☐	☐
	c. Identified to enable the calibration status to be determined?	☐	☐
	d. Safeguarded from adjustments that would invalidate the measurement result?	☐	☐
	e. Protected from damage and deterioration during handling, maintenance and storage?	☐	☐
d.	Monitoring and Measuring Results– Does your organization assess and record the validity of previous measurement results when the monitoring and measuring devices are found not to conform to requirements?	☐	☐

5.7 Control of Nonconforming Materials

Overview – Your organization shall ensure that materials and products that do not meet specified requirements are identified and controlled to prevent their unintended use or delivery. The controls, related responsibilities and authorities for dealing with nonconforming materials and products shall be defined in the MS Manual and applicable documented procedure.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained. Control of nonconforming materials and product extends to the installation and application at the project / jobsite.

Question	Yes	No
1. Defined Process – Does your organization have a defined process that defines the controls (identification, documentation, evaluation, segregation and disposition), related responsibilities and authorities for dealing with nonconforming materials and product?	☐	☐
2. Actual Practice - Through a review of records and process observation is your organization following your defined processes?	☐	☐
3. Control - Does your organization deal with non-conforming materials and product in one or more of the following ways:		
a. By taking action to eliminate the detected nonconformity and ensure the nonconformity?	☐	☐
b. By authorizing its use, release or acceptance under concession by the relevant authority including the customer?	☐	☐
c. By taking action to preclude its original intended use or application?	☐	☐
4. Actual Practice - Through a review of records and process observation is your organization following your defined processes?	☐	☐
5. Control - Does your organization deal with non-conforming materials and product in one or more of the following ways:	☐	☐
6. Control after Delivery – Does your organization have controls in place to carry out the following:	☐	☐
a. When is nonconforming materials or product detected after installation or application does the organization act appropriate to the potential effects of the nonconformity (including recall of material and products)?	☐	☐
b. Does the organization notify AHJs and customers once the nonconformity is determined to affect safety?	☐	☐

5.8 Training and Qualification of Staff

Overview – Your organization shall determine and provide the resources needed to implement and maintain the Management System and fulfill requirements for the installation of SFRMs in accordance with requirements. Personnel performing SFRM selection, installation, audit, and/or testing shall be competent based on appropriate education, training, skills and experience. Personnel shall demonstrate proficiency by means of examination or equivalent. The effectiveness of the proficiency method must be validated. Records of training, qualification and effectiveness shall be maintained.

Your organization shall determine the necessary level of competence for staff whose work affects the fulfillment of requirements by installation of SFRMs; provide education and training to satisfy these needs; evaluate the effectiveness of the training; maintain appropriate records of education, training, skills and experience; periodically reevaluate staff competence.

Your organization shall demonstrate that the DRI and responsible personnel have appropriate skills and knowledge regarding the selection and application of SFRM in accordance with manufacturer application requirements; specific fire resistance design; applicable building codes; established industry guidelines (NFCA 100, NFCA 200, NFCA Quality Management System for SFRM Contractors).

Question		Yes	No
1.	Competence/Training – Has your organization addressed personnel competence, awareness and training with regard to the following:	☐	☐
	a. DRI on staff that has passed the required UL Solutions Exam and has maintained required CEUs or reexamination?	☐	☐
	b. Determined the necessary competence for personnel performing work (personnel performing installation, application, audit, testing and repair or rework)?	☐	☐
	c. Provided training or other necessary actions to satisfy these needs?	☐	☐
	d. Evaluated the effectiveness of the actions taken?	☐	☐
	e. Ensure that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of product quality and/or safety?	☐	☐
	f. Maintaining appropriate records of education, training, skills and experience?	☐	☐
2.	Reevaluation – Is the competency of personnel periodically reevaluated, including that of the DRI?	☐	☐
3.	Contingency Plan – Does your organization have a formal Contingency Plan in the event the DRI is no longer employed by the Contractor or is otherwise unable to fulfill the duties of DRI so that requirements of the Program will continue to be fulfilled?	☐	☐

5.9 Corrective Action

Overview – Your organization shall use corrective action as a tool to address nonconformities and as a tool for improvement. Corrective actions should be focused on eliminating causes of nonconformities to prevent recurrence.

Sources of information for corrective action should include customer complaints, process and product nonconformity reports, audit results, test results, measurements and audits, etc. The MS documentation shall include a procedure to define requirements for:

- Reviewing Nonconformities (including test failures and customer complaints).
- Determining the causes of Nonconformities.
- Determining and implementing the actions needed to correct the nonconformity and prevent recurrence.
- Recording the results of actions taken.
- Reviewing the effectiveness of actions taken.

Question	Yes	No
1. Defined Process – Does your organization have a defined process for the corrective action system and does it address the following:	☐	☐
a. Reviewing nonconformities (customer complaints, material, process/product, audits, trends, etc.)?	☐	☐
b. Determining the cause of the nonconformity?	☐	☐
c. Evaluating the need for action to correct the nonconformity and ensuring that the nonconformity does not reoccur?	☐	☐
d. Determining and implementing the action needed?	☐	☐
e. Maintaining records of the action taken?	☐	☐
f. Reviewing the effectiveness of the action taken?	☐	☐
2. Actual Practice - Through a review of records, is your organization following their defined corrective action system?	☐	☐
3. Review of Nonconformities – Does your organization review customer complaints, process/ product nonconformities as an input into the corrective action system?	☐	☐
4. Root Cause – Is the cause of the nonconformities determined?	☐	☐
5. Action – Is appropriate action taken to correct the nonconformities and prevent reoccurrences?	☐	☐
6. Review – Are actions taken reviewed for effectiveness, including those related to CB (e.g., audits, audits of lots, review of audit and/or test data, etc.)?	☐	☐

5.10 Management System Monitoring and Improvement

Overview – Your organization shall provide evidence of their commitment to the development and implementation of a MS. This can be effectively achieved if management communicates to the Contractor Organization the importance of meeting requirements; establishes a policy and objectives related thereto; defines and communicates responsibilities and authorities within the organization; conducts management reviews; provides adequate resources.

Your organization shall continually improve the effectiveness of the MS using the audit results, analysis of data, corrective and preventive actions, and management review. Your organization's DRI shall audit activities and responsibilities that are outside his/her direct control to assure the Management System is effectively implemented. These audits shall be planned and take into consideration the status and importance of the activity to be audited as well as the results of previous audits. The DRI has responsibility for planning, conducting, reporting audit results and maintaining audit records. These responsibilities and requirements should be documented.

Your organization's DRI, optionally with top management, should review the suitability, adequacy and effectiveness of the MS at planned intervals. The inputs into management review should include management objectives; results of audits; DRI audits; staff competency; customer feedback; project nonconformities; UL Solutions' feedback; status of corrective and preventive actions; follow-up actions from previous management reviews; changes that could affect the Management System and recommendations for improvement. The output from management review should include decisions and actions related to improvement of the effectiveness of the MS; improvement of processes related to fulfilling requirements; and resources. Records from management reviews should be maintained.

Question	Yes	No
1. Commitment - Does evidence exist (observed or documented) of management's commitment to the development and implementation of a MS?	☐	☐
2. DRI Audit Procedure – Does the DRI in accordance with a documented procedure audit activities that are outside his/her direct control to assure the MS is effectively implemented?	☐	☐
3. DRI Audit – Does the DRI plan, conduct, report audit results and maintain audit records?	☐	☐
4. Management Review – Does management review the suitability, adequacy and effectiveness of the MS at planned intervals?	☐	☐
5. Management Review Inputs- Does the inputs into management review include the following:	☐	☐
1. Management objectives?	☐	☐
2. Customer feedback and UL Solutions' feedback?	☐	☐
3. Results of audits (process performance and product conformity)?	☐	☐
4. DRI audits?	☐	☐
5. Status of corrective and preventive actions?	☐	☐
6. Staff competency?	☐	☐
7. Follow-up actions from previous management reviews?	☐	☐
8. Changes that could affect the MS and recommendations for improvement?	☐	☐
6. Management Review Output- Does the output from management review include decisions and actions related to the following:		
1. Improvement of the effectiveness of the MS?	☐	☐
2. Improvement of installations and applications of product related to customer requirements?	☐	☐
3. Resources?	☐	☐

5.11 Documentation and Record Keeping

Overview – Your organization should establish a documented system that is controlled and includes a policy, a manual, procedures, work-instructions, and additional documents and records so that processes and activities are carried out as planned to meet requirements.

Your organization should have a documented system in place to define the controls required for:

a. approval of documents for adequacy prior to use.
b. review and update of documents.
c. changes and identification of revision status of documents.
d. availability of relevant documents at points of use.
e. legibility and document identification.
f. documents of external origin (identification and distribution control).
g. prevention of unintended use of obsolete documents.

Records are a special type of document that require specific controls (identification, storage, protection, retrieval, retention, disposition). The contractor shall establish a documented system for the control of records.

Included in the MS documentation is a manual (or equivalent), which contains documented statements of policy and objectives; procedures established for the MS (or reference to them); documents needed by the Contractor for the effective operation of the Management System; responsibilities, including responsibilities of the DRI.

Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the MS. Records shall remain legible, readily identifiable and retrievable, and shall be retained for a period of 7 years or as required by code or government regulation.

Question	Yes	No
1. Quality Manual - Does your organization have a documented manual that includes the following:	☐	☐
1. Documented procedures or reference to them?	☐	☐
2. Description of the interaction between processes or activities within the system?	☐	☐
3. Quality policy?	☐	☐
2. Control of Documents – Does your organization have a documented procedure for the following:	☐	☐
a. Approval of documents for adequacy prior to issue, including review to ensure CB requirements were addressed?	☐	☐
b. Review and update of documents as necessary with re-approvals, including updates to reflect current requirements?	☐	☐
c. Identification of document changes and current revision status?	☐	☐
d. Availability of relevant versions of documents at points of use?	☐	☐
e. Ensuring documents are legible and readily identifiable?	☐	☐
f. Ensuring documents of external origin (CB procedures, standards, etc.) are identified and their distribution controlled?	☐	☐
g. Preventing unintended use of obsolete documents and identifying such documents if they are retained?	☐	☐

Question	Yes	No
3. Control of Records (General) – Does your organization have a documented procedure for the following?		
a. Identification of records?	☐	☐
b. Protection of records?	☐	☐
c. Retrieval of records?	☐	☐
d. Retention times of records?	☐	☐
e. Disposition of records?	☐	☐
4. Control of Records (Required) – Are the following records maintained, at a minimum?	☐	☐
a. Construction documents (architectural and structural drawings, and specifications?)	☐	☐
b. Project quotations?	☐	☐
c. Incoming material audit?	☐	☐
d. Quantity surveys and records of the material used compared to the quantity surveys?	☐	☐
e. Installation audit and test records?	☐	☐
f. Equipment calibration records?	☐	☐
g. Customer complaints records, with Corrective Action (and Preventative Action as appropriate)?	☐	☐
h. Corrective and Preventive Action records?	☐	☐
i. Non-conforming material records?	☐	☐
j. Staff education, training, competency evaluations and training effectiveness?	☐	☐
k. Management review records?	☐	☐
11. Actual Practice (Documents) - Through a review of the document control system and actual documents found in use, is your organization following defined process for the control of documents?	☐	☐
12. Actual Practice (Records) - Through a review of records and your organization's actual practice, is the organization following their defined process for control of records?	☐	☐