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LES-10-00212-NRC

ATTN: Document Control Desk
Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Louisiana Energy Services, LLC
NRC Docket No. 70-3103

Subject: Response to NRC Request for Additional Information for LAR 10-08

Reference:
1) NRC Letter from B. Smith (NRC) to G. Sanford (LES), Request for Additional Information for License Amendment Request for Implementation of Fire Protection Items Relied on For Safety (LAR-10-08) (TAC NO. L33006) dated September 2, 2010
2) LES Letter LES-10-00127-NRC, Submittal of License Amendment for Implementation of Fire Protection IROFS (LAR-10-08), dated July 16, 2010

Pursuant to the NRC's Request for Additional Information (RAI) (Ref. 1) on the Ref. 2 document, URENCO USA (UUSA) herewith submits (see Enclosure 2) responses to the NRC's RAIs on proposed Section 23 of the QAPD and QL-1F program scope. These responses address the respective RAIs by providing the requested information and changes that will be made to the QAPD submittal. (See Enclosure 1)

Should there be any questions concerning this submittal, please contact Mr. Gary Sanford, LES Director, Quality and Regulatory Affairs, at 575.394.5407.

Sincerely,

Allen W. Sorrell

Allen Sorrell for
David E. Sexton
Chief Nuclear Officer and Vice President of Operations

Enclosures 1) UUSA Responses to NRC's Request for Additional Information for License Amendment Request for Implementation of Fire Protection Items Relied on For Safety (LAR-10-08)
2) LAR 10-08 Revised Sections 1.2, 3.1.3 and QAPD Section 23 Replacement Pages

NMSS01

cc:

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ENCLOSURE 1

Response to NRC's Request for Additional Information for License Amendment Request for Implementation of Fire Protection Items Relied On For Safety (LAR 10-08) (TAC No. L33006)

NRC RAI No. 1:

Please describe the planned implementation of QL-1F program, specifically:

a. To which fire protection items will the QL-1F program be applied (i.e., only new procurements)?

b. Please identify the items that have already undergone commercial grade dedication and clarify if the QL-1F program will modify the treatment of these items.

UUSA Response No. 1:

a. The implementation of QL-1F will apply to fire protection items or components procured for new and continued installations and for replacement fire protection items under the maintenance program.

b. IROFS35 components or assemblies that are currently or previously dedicated will remain as processed under the Commercial Grade Dedication Program (CGDP), and will not be treated differently until the item is replaced under the maintenance/modification program.

The following IROFS35 items and assemblies have already undergone the CGDP process:

1. 1001/1002-UF6, IROFS35 boundary Fire Doors and Frames, and associated fusible links, as applicable (UL Labeled).
2. 1001/1002-UF6, IROFS35 boundary Fire Dampers, and associated fusible links, (UL Labeled).
3. 1100 CRDB South wall Fire Rated INSULROCK Panels (UL System U042) and mounting hardware (i.e., attachment screws).
4. 1100 CRDB exterior Fire Rated Dendamix (DDM) fireproofing (UL Systems U808, X836 and P827), steel panels and attachment screws.
5. 1100 CRDB roof fire rated Z-146 Monokote fireproofing (UL System U703), steel panels.
6. 1001/1002-UF6, IROFS35 concrete barriers. All concrete used for IROFS35 will remain commercially dedicated because the concrete can not be readily UL certified.

NRC RAI No. 2:

Please identify if sampling will be used as part of the QL-1F program. If it will, please identify the areas in which sampling will be used (e.g., inspection) and provide a description of how sampling will be applied in a graded manner.

UUSA Response No. 2:

For UL labeled or certified items no sampling will be performed. QL-1F items that are not UL labeled or certified are sampled per existing procedures. Materials will be procured as QL-1F materials, and inspected upon receipt in accordance with existing Procurement Procedure PR-3-2000-01, "Control of Procurement". In addition, installation verification of the equipment/component function will be completed through post installation and/or post maintenance testing in accordance with existing procedures for controlling QL-1 activities per Sections 10, 11, and 14 of the QAPD.

NRC RAI No. 3:

First and Second paragraph:

LAR 10-08 states that, "The objective of this License Amendment Request (LAR) is to change the Quality Assurance Program Description (QAPD) to add a new graded quality assurance program designated QL-1F applicable to fire protection features designated as items relied on for safety (IROFS) that would ensure that the systems utilized at Louisiana Energy Services (URENCO USA) are commensurate with the nuclear power industry. This level of quality has been accepted in the industry and demonstrated to provide an acceptable level of reliability. "Section 3.1.1, "Conclusions," of the LAR states that, "The QL-1F quality assurance program is commensurate with the establishment of fire protection programs as detailed in Regulatory guide (RG) 1.189 (Fire Protection for Operating Nuclear Power Plants)."

The staff notes that RG 1.189, "Fire Protection for Operating Nuclear Power Plants," Revision 2, dated October 2009, is over 130 pages long, and contains many provisions in addition to quality assurance provisions, RG 1.189 was developed to provide a comprehensive fire protection program guidance document and to identify the scope and depth of fire protection that the staff would consider acceptable for nuclear power plants. Additionally, RG 1.189 contains provisions that implement Title 10 of the Code of Federal Regulations (10 CFR) Part 50 requirements such as Appendix R to 10 CFR Part 50, and General Design Criteria 3, "Fire Protection." Further, the quality assurance (QA) provisions contained in RG 1.189 need to be used in conjunction with other provisions contained in the RG. Staff notes that the provisions contained in RG 1.189 are not intended to satisfy the QA requirements contained in Appendix B to 10 CFR Part 50. RG 1.189 describes a method that the U.S. Nuclear Regulatory Commission considers acceptable for use in implementing specific parts of the agency's regulations for fire protection for nuclear power plants.

Third paragraph:

Please provide a technical analysis or reference material to show that the proposed QL-1F program contains requirements commensurate with those implemented in the nuclear power industry.

UUSA Response No. 3:

First and Second paragraph:

It is not the intent of URENCO USA (UUSA) to imply that the quality assurance program QL-1F requested per LAR 10-08 is commensurate with the entire fire protection program as detailed in Regulatory Guide 1.189, *Fire Protection for Operating Nuclear Power Plants*. The UUSA recommended QL-1F quality assurance program addresses the same requirements contained in C.1.7 (Quality Assurance), as well as those established in 10 CFR 50, Appendix B (Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants), Sections I through XVIII.

Applying a fire protection program established for a commercial nuclear power plant to the UUSA site would be excessive. For example, unlike commercial nuclear power plants, electrical power is not required to safely shutdown the facility. The loss of electrical power to operating systems does not result in exceeding a 10 CFR 70.61 performance requirement. Maintaining electric power is for investment purposes only. Therefore, the application of Regulatory Guide 1.189 requirements and/or Appendix R to Part 50 (*Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979*) is excessive for the UUSA site.

The UUSA recommended quality assurance program QL-1F, which is applicable to the fire protection features designated as items relied on for safety (IROFS), is a graded approach applied to the fire protection program's quality assurance based on facility risk as described in the Safety Analysis Report (Sections 3 and 7). In summary, UUSA is not committing to the use of RG 1.189 or Appendix R of Part 50.

To clarify the above in the submitted LAR 10-8, the following revisions are made:

Revise Section 1.2 (Background), first paragraph:

"The objective of this License Amendment Request (LAR) is to change the QAPD to add a new graded quality assurance program designated QL-1F applicable to fire protection features designated as IROFS that ensure the applicable quality assurance provisions are applied to the IROFS fire protection features utilized at URENCO USA."

Revise Section 3.1.3 (Conclusion), last sentence:

"The QL-1F quality assurance program is a graded approach applied to the fire protection program's quality assurance based on the facility's risk as described in the Safety Analysis Report (Section 3 and 7)."

Third paragraph:

UUSA intends to maintain the current NQA-1 requirements except for the sections listed below. The sections noted below will require revision to include the changes proposed through LAR 10-08 to ensure proper procurement, installation and testing of the IROFS35 fire protective assemblies and/or components. Changes to these sections are discussed in the response to RAI QUESTION 4.

- D. Procurement Document Control
- G Control of Purchased Material, Equipment and Services
- H Identification and Control of Materials, Parts, and Components.

Most of the fire protective features used to prevent fire from entering areas containing uranic material (IROFS35) are only available commercially and require dedication under NQA-1. Utilizing commercially dedicated items, assemblies or components to satisfy IROFS35 fire protection requirements provides little, if any, benefit that can not be achieved by utilizing nationally recognized fire testing standards, laboratories and programs provided the certified item is controlled post receipt, installed, tested and inspected to meet the tested and certified assemblies. Dedicating already fire tested, certified and labeled components is superfluous and does not provide increased reliability.

National Fire Protection Association (NFPA), American Society of Testing Materials (ASTM), Factory Mutual (FM) and Underwriter Laboratories (UL) are all nationally recognized standards and organizations that are extremely reputable in the development of standards and/or testing of products to ensure safety and reliability. UL and FM are commonly referenced through implementation of site specifications, the Safety Analysis Report (SAR) and the aforementioned standards.

The UL and FM symbols are recognized globally as two of the most respected safety testing organizations. Many products display the UL and FM Mark to demonstrate they have taken the initiative to have their product certified by UL or FM. Under UL programs and processes, if the evaluation is successful manufacturers submit their factories to periodic unannounced inspections by representatives of UL who audit production to determine the manufacturer's continued compliance with UL's requirements. The UL Mark on a product means that UL has tested and evaluated representative samples of that product and determined that it meets UL requirements. Under a variety of programs products are periodically checked by UL at the manufacturing facility to make sure they continue to meet UL requirements. The UL Marks may only be used on or in connection with products certified by UL and under the terms of written agreement with UL.

The UL Mark appears on products that UL has evaluated, tested and approved, but only with respect to specific properties, a limited range of hazards, or suitability for use under limited or special conditions. Typically, products Classified by UL fall into the general categories of building materials and industrial equipment. Examples of types of equipment Classified by UL include immersion suits, fire doors, fire dampers, protective gear for fire fighters and industrial trucks. Fire coatings and other fire protective products that can not physically be labeled are listed in the UL Fire Resistance Directory, thus certifying the products within the bounds of the tested assembly. In these cases where the product can not be labeled, compliance during the installation process is controlled through administrative procedures, in-process testing and final inspections.

In the Classification service, UL determines that a manufacturer has demonstrated the ability to produce a product complying with UL's requirements with respect to one or more of the following:

- Specific risk, e.g., casualty, fire, etc.
- Performance under specific conditions
- Compliance with regulatory codes
- Compliance with specific standards such as international standards
- Other condition, as determined by UL

All of the products carrying a UL Classification Mark are covered by UL's follow-up services program to verify that products carrying the UL Classification Mark continue to be manufactured in compliance with UL's safety requirements.

It is with this rigorous process and testing programs that UUSA finds UL tested, labeled or listed components to be adequate to substantiate product reliability, safety and consistent function and operability to meet the IROFS35 design function.

Site Specifications and Technical Requirements:

IROFS35 Fire Dampers:

Site Specification 114489-S-M-15864 requires Fire Dampers to meet UL-555 and installation to meet the requirements of NFPA 90A, both of which are industry standards. Dampers are procured to meet specification requirements, and are in accordance with UL-555. UL obtains the damper type and model from manufacturers and tests the damper to ensure compliance and function to various hourly ratings to meet industry uses and requirements. Fire dampers are developed to meet NFPA 90A standards as well as UL-555 performance expectations. UL tests the fire dampers as supplied from the manufactures in accordance with the UL-555 time and temperature curve along with other requirements as required by this standard. Upon acceptance, tested damper models are certified and labeled. Fire dampers in IROFS35 barriers are currently NQA-1.

IROFS35 Fire Doors:

Site Specification LES-S-S-08110 dictates the requirements for Steel Doors and Frames. Fire doors are required to be tested by UL in accordance with UL-10B, UL labeled and installation to meet NFPA-80. Fire doors are procured and processed in the same manner as fire dampers. Fire doors in IROFS35 barriers are currently NQA-1.

IROFS35 Through Barrier Fire Penetration Seals:

Site Specification 114489-S-M-15192 requires fire penetration seals to meet the guidance of ASTM E-814 and UL-1479, and/or ASTM E-119 with prior engineering approval. Fire ratings are required to meet the International Building Code (IBC). Currently, through barrier fire penetration seals installed in IROFS35 barriers have been installed and inspected in accordance with NQA-1 requirements and site specifications. Not all penetration seal installers or suppliers utilize or list their products within the UL process or Fire Resistance Directory due to the proprietary nature of their products, marketing techniques and policies. Fire testing to support specification requirements and designs used at UUSA are third party tested, and are reviewed by Engineering to ensure compliance with required standards and site specifications. Regardless of whether the design is listed, all IROFS35 fire penetration seals are bound to testing in accordance with NRC guidance identified in IN-88-04, and evaluated in accordance with GL 86-01 guidance and methods to ensure design function and performance. The issuance of IN-88-04 was a direct result of the nuclear industry utilizing tested fire penetration seal designs outside the fire tested limitations. From the onset, UUSA decided to utilize this guidance because it did not want to repeat industry mistakes. If UL listed fire penetration seals are allowed and used the seal must be inspected and evaluated to limiting parameters of the UL System number used to seal the opening to ensure fire performance is maintained. Fire penetration seals in IROFS35 barriers are currently NQA-1.

No change in NQA-1 requirements for fire penetration seals with formulations that require site mixing and dispensing through machine application.

IROFS35 Barrier (Concrete):

IROFS35 barriers are constructed from reinforced concrete which is not specifically fire tested in the finished state or UL labeled. Reinforced concrete is highly resistant to fire exposure failure and has been accepted as the preferred barrier material for fire barriers throughout the nuclear industry. Site Specification LES-S-S-03310 dictates the requirements for concrete mix and delivery and Specification LES-S-S-03312 dictates the requirements for placement and curing of concrete. IROFS35 reinforced concrete barriers are currently NQA-1 (CGDP). No change in NQA-1 concrete requirements is requested for poured in place concrete. Concrete used in prefabricated precast concrete panels shall meet the minimum requirements of Specifications LES-S-S-03410 Fabrication and Erection of Precast Concrete Wall Panels, and LES-S-S-03414 SBM-1003 Design, Fabrication, and Erection of Precast Concrete Wall Panels.

IROF35 Fireproofing Used in Bulkhead Type Partition:

Some IROFS Barriers will be constructed utilizing B-Deck with fireproofing to meet desired rating as required by IBC. The partition design uses UL listings as a basis to construct and provide IROFS35 fire barrier protection. The materials are currently NQA-1 (CGDP).

NRC RAI No. 4 A Through 4 K

Please provide further justification with respect to the graded approach used to establish the QL-1F QA Program requirements. The LES QAPD states that:

> ***The LES Quality Assurance Program conforms to the criteria established in Title 10 of the Code of Federal Regulations 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants. The criteria in 10 CFR 50, Appendix B and 10 CFR 71 Subpart H, are met by LES's commitment to follow the guidelines of the American Society of Mechanical Engineers (ASME) Quality Assurance (QA) standard NQA-1-1994, Quality Assurance Program Requirements for Nuclear Facilities, including supplements as revised by the ASME NQA-1a-1995 Addenda.***

In order to fully describe the graded QA program, please (1) identify the criteria in which the QL-1F program differs from that of the Q-1 program (which meets the requirements of Appendix B and NQA-1) and, (2) provide technical justification for why the divergences are acceptable to maintain the reliability and availability of QL-1F IROFS. The topics identified below may serve as a guide to answering these questions:

NRC RAI 4A-Organization:

1. ***Please describe why the Organization described in Section 23.1 of the QAPD for QL-1F differs from that of the QL-1 program. For instance, no specific organizational structure, roles, and responsibilities are defined for the QL-1F program, whereas the QL-1 program identifies the QA Organization and Functions and makes reference to where a flowchart of the operating organization can be found in the safety analysis report.***
2. ***Please identify why the Organization described in Section 23.1 of the QAPD for QL-1F does not address the requirements of Supplement 1S-1, "Supplementary Requirements for Organization," of NQA-1.***

UUSA Response to 4A-Organization:

Through consideration of Organization requirements of the QAPD for the QL-1F program, UUSA has determined that Organization requirements for the QL-1F program will be in accordance with the requirements of Section 1 of the QAPD. As such the QAPD submitted for the QL-1F program, Section 23.1 will be revised to state, "The Organization requirements for the QL-1F Program shall be in accordance with Section 1 of the QAPD".

NRC RAI 4B-QA Program

1. ***Please identify why the QA program described in Section 23.2 of the QAPD for QL-1F does not address the requirements of Supplement 2S-1, "Supplementary Requirements for the Qualification of Inspection and Test Personnel;" Supplement 2S-2, "Supplementary Requirements for the Qualifications of Nondestructive Examination Personnel;" Supplement 2S-3, "Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel;" and Supplement 2S-4, "Supplementary Requirements for Personnel Indoctrination and Training," of NQA-1.***

2. ***Also, please identify where the following commitments, as specified in Basic Requirements 2 of NQA-1, may be found in the QAPD for QL-1F or justify their exclusion:***
    - ***The QA program shall provide for any special controls, processes, test equipment, tools, and skills to attain the required quality and for verification of quality.***
    - ***Management of those organizations implementing the QA program, or portions thereof, shall regularly assess the adequacy of that part of the program for which they are responsible and shall assure its effective implementation.***

UUSA Response 4B –QA Program:

1. For QL-1F, requirements of Supplement 2S-1, "Supplementary Requirements for the Qualification of Inspection and Test Personnel;" Supplement 2S-2 "Supplementary Requirements for the Qualification of Nondestructive Examination Personnel;" Supplement 2S-3 "Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel;" and Supplement 2S-4 "Supplementary Requirements for Personnel Indoctrination and Training," of NQA-1 will be met in accordance with Section 2 of the QAPD.

2. For QL-1F, the QA Program shall provide for any special controls, processes, test equipment, tools, and skills to attain the required quality and for verification of quality in accordance with section 2 of the QAPD. Also, for QL-1F, management of those organizations implementing the QA program, or portions thereof, shall regularly assess the adequacy of that part of the program for which they are responsible and shall assure its effective implementation in accordance with Section 2 of the QAPD.

Based on the above the statement "The QA Program for the QL-1F Program shall be in accordance with the requirements of Section 2 of the QAPD" will be inserted into Section 23.2 of the QAPD.

NRC RAI 4C-Design Control

1. ***Please describe why the QL-1F Design Control program, as described in Section 23.3 of the QAPD, does not include all the provisions identified in Basic Requirement 3 and Supplement 3S-1 of NQA-1. To support this discussion, please describe the design activities that have been and will be performed in relation to fire protection equipment.***

2. ***Please describe the use of design inputs, processes, and analyses for URENCO USA. In addition, please describe the extent that qualification testing will be performed for QL-1F items.***

3. ***Please describe how change control measures identified in Section 23.3 will ensure that proper justification is documented for design changes and that design interfaces are identified and controlled.***

4. ***Please identify (or describe where in the QAPD this information can be found) the provisions that control the collection, storage, and maintenance of QL-1F design-related documents. Also, please describe the criteria for selection of QL-1F design documents that will be retained as records.***

UUSA Response 4C –Design Control:

Through consideration of Design inputs, processes, control of design related documents, and NQA-1 requirements associated with Section 3 QAPD for the QL-1F program, UUSA has determined that Design Control requirements for the QL-IF program will be in accordance with Section 3 of the QAPD. As such the QAPD submitted for the QL-1F program, Section 23.3 will be revised to state, "The Design Control for the QL-1F Program shall be in accordance with the requirements of Section 3 of the QAPD".

NRC RAI 4D-Procurement Document Control

1. ***Please describe why the QL-1F Procurement Document Control program, as described in Section 23.4 of the QAPD, does not include all the provisions indentified in Basic Requirement 4 and Supplement 4S-1 of NQA-1. Please provide justification of why the excluded provisions are not necessary to ensure that the technical and quality requirements of QL-1F items will be properly invoked in procurement documents.***

2 ***For QL-1F procurements that are not purchased as commercial grade items, please describe the requirements that will be imposed on suppliers via procurement documents (i.e. they must have a QA program or certification that meets the requirements of the National Fire Protection Association, Underwriters Laboratories, etc.)***

UUSA Response RAI 4D-Procurement Document Control

1. For comparison purposes only, it should be noted that the fire protection graded program for Procurement Document Control is listed in C.4 (Quality Assurance Program) of NUREG 0800, 9.5.1, 1981 and Branch Technical Position APCSB 9.5-1 as an applicable criterion associated with the Design and Procurement Document Control. Thus, UUSA will procure QL-1F items as QL-3 with the procurement document stipulating the requirement for the material to meet one or more industry standards such as NFPA, UL, FM, ASTM or other national recognized industry standards.
2. For QL-1F procurements for fire related IROFS will be procured as QL-3 items with the purchasing document listing the specific requirement for the material to meet one or more of the national recognized industry standards. There will be no requirement for the supplier to have a QA program as the acceptability for the QL-1F material is based on the manufacturer certification to one or more of the above listed agencies along with a receipt inspection of the items to assure that the procurement document requirements are met.

To clarify, this section of the QAPD (23.4) will be the revised as follows:

The elements of the UUSA QA Program described in this section and associated procedures implement the requirements of Criterion 4, Procurement Document Control, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 4 and Supplement 4S-1 of NQA-1-1994.

Applicable design bases and other requirements necessary to assure adequate quality shall be included or referenced in procurement documents for items and services.

Procurement Document Content
UUSA procurement documents issued for QA Level 1F (QL-1F) items or services shall include the following provisions, as applicable to the procured material, equipment or service as described in approved procedures controlled under the QAPD:

- Statement of the scope of work to be performed by the supplier.
- Technical requirements including:
    - Design bases, identified or referenced in the procurement documents.
    - Specific documents (such as drawings, codes, standards, regulations, procedures or instructions) describing the technical requirements of the material, equipment or services to be furnished, shall be specified along with their revision level or change status.
    - Tests, inspections or acceptance requirements that UUSA will use to monitor and evaluate the performance of the supplier shall be specified.

Quality Assurance Program requirements including:

- Right of access to supplier, including subtier, facilities and records for inspection or audit by UUSA, or other designee authorized by UUSA.
- Provisions for establishing witness/inspection hold points beyond which work cannot proceed by the supplier without UUSA QA Manager authorization. The Procurement Director may also establish hold points indicating work that cannot proceed without authorization by the Procurement Director.
- Provisions for documentation required to be submitted to UUSA for information, review or acceptance shall be identified along with a document submittal schedule. Record retention times, disposition requirements and record maintenance responsibilities shall be identified for documentation that will become quality assurance records.
- Provisions for identifying spare and replacement parts or assemblies and the appropriate delineation of technical and quality assurance data required for ordering these parts or assemblies.

Procurement Document Review and Approval
Procurement document reviews shall be performed and documented before issuing the procurement documents to the supplier. A review of the procurement documents and any changes thereto shall be made to verify that documents include all applicable requirements specified under Section 23.4, Procurement Document Content, above and contain appropriate provisions to ensure that material, equipment or services will meet the governing requirements.

Procurement Document Change
Changes to the scope of work, technical requirements, quality assurance program requirements, right of access, and lists of spare and replacement parts delineated in

procurement documents, shall be subject to the same degree of control as used in the preparation of the original procurement document.

NRC RAI 4E-Instructions, Procedures, and Drawings

1) ***Please describe the review that will be conducted of fire protection procedures as identified in Section 23.5 of the QAPD. Please include in the description a discussion of who will perform the review; what criteria will be used to perform the reviews; and how frequently the reviews will take place. Also, please describe the information that will be contained in these documents, as appropriate to the circumstances, such as acceptance criteria, prerequisites, quality/regulatory/technical requirements, and personnel responsibilities.***
2) ***Please describe the measures that will be taken to ensure that instructions, procedures, and drawings that govern the fire protection program include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished (See Basic requirement 5, "Instructions, Procedures, and Drawings," of NQA-1).***
3) ***Please clarify if any fire protection instructions, procedures, and drawings will be controlled in accordance with the Document Control program.***

UUSA Response RAI 4E- Instructions, Procedures, and Drawings

Through consideration of Instructions, Procedures, and Drawings for the QL-1F Program, UUSA has determined that Instructions, Procedures, and Drawings requirements for the QL-1F program will be in accordance with Section 5 of the QAPD. As such the QAPD submitted for the QL-1F program, Section 23.5 will be revised to state, "The Instructions, Procedures, and Drawings for the QL-1F Program shall be in accordance with the requirements of Section 5 of the QAPD".

NRC RAI 4F-Document Control

1) ***Please describe why he QL-1F Document Control program, as describe in Section 23.6 of the QAPD, does not include all the provisions identified in Basic Requirement 6 and Supplement 6S-1 of NQA-1.***
2) ***Please provide further details regarding how documents that furnish evidence of the quality of critical elements of QL-1F components will be specified, prepared, and maintained. Please include a description of how such documents, including changes thereto, will be controlled, reviewed, and approved.***

UUSA Response RAI 4F- Document Control

Through consideration of Document Control activities for the QL-1F Program, UUSA has determined that Document Control requirements for the QL-1F program will be in accordance with Section 6 of the QAPD. As such the QAPD submitted for the QL-1F

program, Section 23.6 will be revised to state, "Document Control for the QL-1F Program shall be in accordance with the requirements of Section 6 of the QAPD".

NRC RAI 4G-Control of Purchased Material, Equipment and Services

1. ***Please describe the measures that will be taken (i.e., evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services upon delivery or completion) to ensure that the suppliers of material, equipment, or services related to the fire protection program are capable of supplying such items or services in accordance with specified requirements.***

   For the use of national codes or standards as part of establishing supplier capability, please consider the following and describe measures that will be implemented to meet these criteria:

   - ***When a QL-1F item is to be manufactured to a national code or standard, the national code or standard must include some independent product endorsements based on qualification testing or periodic testing or selected critical characteristics in order to be able to take credit for those design features (i.e., critical characteristics) that are required of the item.***
   - ***When a QL-1F item is to be manufactured to a national code or standard and the national code or standard does not include any independent product endorsements based on qualification testing or periodic testing and instead only establishes certain process controls and end product acceptance requirements, the accepting party must still verify the selected design features (i.e., critical characteristics) that are required of the item.***

2. ***Please identify if commercial grade dedication will be used for items and services which are not available for purchase from suppliers that manufacture to a national code or standard.***

3. ***Please clarify the process identified in Section 23.7 of the QAPD that URENCO USA Engineering will implement to define the design requirements for QL-1F components and material.***

UUSA Response RAI 4G- Control of Purchased Material, Equipment, and Services

1. There will be no requirement for the supplier/manufacturer to have a QA program nor will a source inspection or audit need to be performed. The acceptability for the QL-1F material is based on the manufacturer certification to one or more of the national recognized industry standards along with a receipt inspection of the items to assure that the procurement document requirements are met.

   First Bullet: For QL-1F items that specify one or more of the listed agencies in the procurement document will also assure that the item being ordered is included in the agencies periodic testing to assure continued compliance with the agencies requirements.

   Second Bullet: For those items that do not include periodic testing to assure

compliance, UUSA will verify and accept these items by UUSA Engineering review and acceptance or be tested by a third party to a nationally recognized industry standard.

2. It is not anticipated that UUSA will be procuring any items or services for fire related IROFS which are not available for purchase from suppliers that manufacture to a national code or standard. If a case does arise where an item is not manufactured to a national code or standard, UUSA will verify and accept these items by a UUSA Engineering review and acceptance or be tested by a third party to a national recognized industry standard.
3. UUSA will use the design process as defined by QAPD Section 3.

To clarify, this section of the QAPD (23.7) will be the revised as follows:

The elements of the LES QA Program described in this section and associated procedures implement the requirements of Criterion 7, Control of Purchased Material, Equipment and Services, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 7 and Supplement 7S-1 of NQA-1-1994 Part I as revised by NQA-1a-1995 Addenda of NQA-1-1994. See Section 4 Procurement Document Control for specific LES exemptions to 10 CFR 21.3 for the definitions of "commercial grade item", "basic component", "critical characteristics", "dedicating entity", and "dedication".
LES procurement of material, equipment and services is controlled to assure conformance with specified requirements. These controls include requirements for pre-award evaluations of suppliers' QA programs, annual evaluations, periodic audits/source inspections and surveillance. Suppliers with a LES approved QA program are placed on the LES ASL prior to the item or service being accepted. Source inspections and surveillances, evaluation of objective evidence of quality furnished by the supplier, maintaining the ASL, as well as, examination of received items and services are the responsibility of LES QA organization and are performed, as necessary, upon delivery or completion to ensure requirements specified in procurement documents are met. Supplier evaluations, annual evaluations, audits, surveillances, source inspections and receipt inspections shall be documented.

PROCUREMENT PLANNING

LES procurements shall be planned and documented to ensure a systematic approach to the procurement process exists and supports the schedule. Procurement planning shall be performed in accordance with Supplement 7S-1 Section 2 of NQA-1-1994 as defined in approved procedures controlled under the QAPD. Procurement planning shall be accomplished as early as possible, but no later than at the start of those procurement activities that are required to be controlled to assure interface compatibility and a uniform approach to the procurement process.

These actions will be performed relative to the level of importance, complexity and quantity of the item or service being procured and the supplier's quality performance.

Procurement planning shall include the involvement of the LES QA organization to ensure that the QA requirements have been properly identified.

SOURCE EVALUATION AND SELECTION

Supplier selection shall be based on an evaluation, performed before the contract and/or

purchase order is awarded, of the supplier's capability to provide items or services in accordance with procurement document (technical and quality) requirements.

PROPOSAL/BID EVALUATION

For proposals and bids, technically qualified personnel from the Procurement or other affected/involved organizations shall perform an evaluation to determine if the proposal/bid meets procurement document requirements. As a minimum, this evaluation shall review the following subjects consistent with the importance, complexity and quantity of items or services being procured:

- Technical considerations
- QA program requirements
- Supplier personnel qualifications
- Supplier production capability and past performance
- Alternatives and exceptions

Before the contract is awarded, the Procurement Director, or other affected/involved organization manager shall resolve, or obtain commitments to resolve, unacceptable quality conditions identified during the proposal/bid evaluation.

SUPPLIER PERFORMANCE EVALUATION

The LES Procurement Director shall establish measures to routinely interface with the supplier and to verify supplier performance. The measures shall include:

- Establishing an understanding between LES and the supplier of the requirements and specifications identified in procurement documents.
- Requiring the supplier to identify planning techniques and processes to be used in fulfilling procurement document requirements.
- Reviewing supplier documents that are prepared or processed during work performed to fulfill procurement requirements.
- Identifying and processing necessary change information.
- Establishing the method to be used to document information exchanges between LES and supplier.

The extent of LES verifications shall be a function of the relative importance, complexity/quantity of items or services being procured and the supplier's quality performance. Records, receiving inspections, nonconformances, dispositions, waivers, and corrective actions shall be maintained in accordance with the requirements of Section 17, Quality Assurance Records.

CONTROL OF SUPPLIER GENERATED DOCUMENTS

Supplier generated documents shall be controlled, processed and accepted by LES in accordance with the requirements established in the applicable procedures. Measures shall be implemented to ensure that the submittal of supplier generated documents is accomplished in accordance with the procurement document requirements. These

measures shall also provide for the acquisition, processing and recorded evaluation of technical, inspection and test data compared against the acceptance criteria.

CONTROL OF CHANGES IN ITEMS OR SERVICES

LES shall establish contractual controls with suppliers to ensure that changes in procurement documents are controlled and documented in accordance with this QAPD.

ACCEPTANCE OF ITEMS OR SERVICES

Methods for accepting supplier furnished material, equipment or services shall include one or more of the following, as appropriate to the items or services being procured:

- Evaluating the supplier certificate of conformance,
- Performing one or a combination of receiving inspection or post-installation test,
- Technical verification of the data produced (services only),
- Review of objective evidence for conformance to procurement requirements (services only).

The supplier shall verify that furnished material, equipment or services comply with LES' procurement requirements before offering the material, equipment or services for acceptance and shall provide to LES objective evidence that material, equipment or services conform to procurement documents. Where required by code, regulations or contract provisions, documentary evidence that items conform to procurement documents shall be available at the site prior to installation or use.

RECEIVING INSPECTION

When receiving inspection is used to accept an item:

- The inspection shall consider any source verifications/audits and the demonstrated quality performance of the supplier.
- The inspection shall be performed in accordance with established inspection procedures.
- The inspection shall verify, as applicable, proper configuration; identification; dimensional, physical and other characteristics; freedom from shipping damage; and cleanliness.
- The inspection shall be planned and executed according to the requirements of Section 10 Inspection.
- Receiving inspection shall be coordinated with a review for adequacy and completeness of any required supplier documentation submittals.

POST-INSTALLATION TESTING

When post-installation testing is used as a method of acceptance the affected/involved LES organization manager and the supplier, when possible, shall mutually establish test requirements and acceptance documentation. The LES –Design Authority is ultimately responsible for ensuring appropriate test requirements and acceptance documentation

are established."

NRC RAI 4.H – Identification and Control of Materials, Parts, and Components

1. ***Please describe how identification will be maintained for QL-1F items in instances in which identification can not be physically maintained on the items.***
2. ***Please identify controls for items having a limited shelf life or life cycle, if applicable.***
3. ***Please describe QL-1F program measures for maintaining the identification and traceability of items when specified by applicable codes, standards, or specifications. Please also include a description of identification and control measures to be applied to items in storage, including any requisite updates to existing records.***

UUSA Response to RAI 4.H – Identification and Control of Materials, Parts, and Components

1. For comparison purposes only it is noted that the fire protection graded program for Identification and Control of Material, Parts and Components is not listed in C.4 (Quality Assurance Program) of NURGE 0800, 9.5.1 1981 and Branch Technical Position APCSB 9.5-1 as an applicable criterion. Thus, UUSA will procure QL-1F items as QL-3, with respect to identification measures, with the procurement document stipulating the requirement for the material to meet one or more of the national recognized industry standards such as NFPA, UL, FM, or ASTM.
2. For those items that have a limited shelf life, PR-3-2000-02 states that UUSA expects 75% of the items shelf life remaining at the time of delivery. Once received, the shelf life is administratively controlled through the warehouse. This will be the same as all other material received at UUSA with limited shelf life.
3. A fire protection graded program for Identification and Control of Material, Parts and Components is not listed in C.4 (Quality Assurance Program) of NURGE 0800, 9.5.1 1981 and Branch Technical Position APCSB 9.5-1 as an applicable criterion. Thus, UUSA will procure QL-1F items as QL-3, with respect to identification and control measures, with the procurement document stipulating the requirement for the material to meet one or more of the national recognized industry standards such as NFPA, UL, FM, or ASTM.

To clarify, this section of the QAPD (23.8) will be the revised as follows:

The elements of the LES QA Program described in this section and associated procedures implement the requirements of Criterion 8, Identification and Control of Materials, Parts and Components, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 8 and Supplement 8S-1 of NQA-1-1994 Part I as revised by NQA-1a-1995 Addenda.
The controls necessary to ensure that only correct QL-1F items are used or installed will be required by the appropriate QA procedure. Identification requirements for materials, parts and components are stated in design specifications, drawings, and procurement

documents. Specific identification requirements are as follows:

- Identification markings, when used shall be applied using materials and methods which provide a clear and legible identification and do not detrimentally affect the function or service life of the item. Markings shall not be obliterated or hidden by surface treatments or coatings unless other means of identification are substituted.
- Documentation is maintained throughout fabrication, erection, installation, or use.
- Sufficient precautions shall be taken to preclude identifying materials in a manner that degrades the function or quality of the item being identified.

Control of material, parts and components is governed by approved procedures. Specific control requirements include the following:

- Identification of nonconforming or rejected materials, parts or components to ensure that they are not inadvertently used.
- Verification of correct identification of materials (including consumable materials or items with a limited shelf life), parts, and components shall be required to prevent the use of incorrect or defective items.
- Receipt inspection to ensure that materials, parts or components are properly identified and that supporting documentation is available as required by procurement specifications.
- Maintaining and replacement of markings and identification records due to damage during handling, aging or environmental exposure.

NRC RAI 4.I- Inspection

1. ***Please describe how the periodicity of (1) inspections of fire protection systems and associated equipment and (2) materials subject to deterioration will be selected.***

2. ***Please identify the characteristics of the fire protection systems, equipment, and materials that will be subject to periodic inspection and identify the inspection methods that will be used.***

3. ***Please clarify the qualification requirements for personnel performing inspections and identify whether acceptance inspections will be performed by persons other than those who performed or directly supervised the work being inspected.***

4. ***Section 23.10, "Inspection," of the QL-1F QAPD states that, "A program for independent inspection of activities affecting fire protection will be established and executed by, or for, the organization performing the activity to verify conformance to documented installation drawings and test procedures for accomplishing activities." Please describe how Section 23.7, "Control of Material, Equipment, and Services," of the QAPD will ensure that suppliers of inspection services are appropriately qualified should LES choose to use contract personnel to perform inspection services.***

5. ***Please describe the controls associated with in-process, in-service, and final inspections performed for QL-1F systems and components, if applicable.***

6. ***Please describe any measures that will be implemented for the use of inspection hold points. Also, please describe inspection planning methods and sampling criteria, if applicable.***

7. ***Please describe the record requirements associated with inspection activities that will be performed for QL-1F activities.***

UUSA Response to RAI 4.I- Inspection

Through consideration of Inspection activities for the QL-1F Program, UUSA has determined that Inspection requirements for the QL-1F program will be in accordance with Section 10 of the QAPD. As such the QAPD submitted for the QL-1F program, Section 23.10 will be revised to state, "Inspection requirements for the QL-1F Program shall be in accordance with Section 10 of the QAPD".

NRC RAI 4.J- Test Control

1. ***Please specify or describe what documents will specify which characteristics of QL-1F material, equipment, and services that will be tested and what test methods will be used.***
2. ***Please describe measures that will be implemented to document and evaluate the test results.***
3. ***Please describe why the QL-1F Test Control program, as described in Section 23.11 of the QAPD, does not include provisions for test requirements, test procedures, test results, and test records, as specified in Supplement 11S-1 of NQA-1.***

UUSA Response to RAI 4.J- Test Control

1. There are two basic meanings for testing and test control. The first is the testing required to qualify the material, equipment, and services as QL-1F (qualification testing). The second is the testing required following installation to ensure that the material, equipment, and services can perform their intended safety function (post work testing). QAPD Section 23.11, Test Control, describes the requirements for post work testing only.

   Fire protection material, equipment, and services performance criteria is defined in the UUSA Integrated Safety Analysis (safety basis) and specified in the design basis by qualified design engineers. This proposed change intends that QL-1F items shall be specified in the design to meet performance requirements of the safety basis. Qualification testing for QL-1F material and equipment is performed by an independent laboratory / product endorser. QL-1F material or equipment are specified in the procurement process that meet an acceptable national code or standard that includes independent product endorsement based on qualification or

periodic testing of the critical characteristics. The acceptability of the material or equipment is reviewed and verified by UUSA prior to use.

Fire rated features that are not specifically tested as identified in UL; ASTM, or NFPA are evaluated to be equivalent in performance to a nationally recognized fire standard.

2. Post work test results are specified and controlled through UUSA approved procedures for acceptance testing and post maintenance testing.

   Qualification test results for QL-1F equipment and material performed by an independent lab / product endorser is reviewed, verified and documented by UUSA prior to use. The verification meets an acceptable national code or standard per the design specifications that includes independent product endorsement based on qualification or periodic testing.

   Qualification test results for equipment that cannot be procured commercially and meet QL-1F criteria must meet equivalent performance to a nationally recognized fire standard.

3. Section 23.11, Test Control, describes the testing of QL-1F equipment, material and components. This refers to post work testing and not qualification testing. Qualification testing, by definition of a QL-1F component, is performed by an independent laboratory / product endorser.

   However, regardless of whether the intent is post work testing or qualification testing, the requirements of QAPD Section 11, Test Control, must be met. Section 23.11 has been revised to reference Section 11 as follows:

   "Following installation, modification, repair, or replacement of fire protection equipment, material or components, sufficient testing is performed to demonstrate satisfactory in-service performance pursuant to the specified design criteria. This testing is in accordance with the requirements of Section 11 of the QAPD. Written test procedures are prepared by the responsible engineering group and incorporate the requirements and acceptance limits contain in the applicable design documents."

NRC RAI 4.K- Handling, Storage, and Shipping

1. ***Please describe measures that will be implemented to control the handling, storage, cleaning, packaging, shipping, and preservation of QL-1F items to prevent damage or loss and to minimize deterioration.***

2. ***Please describe why the QL-1F Handling, Storage, and Shipping program, as described in Section 23.13 of the QAPD, does not include provisions for handling, storage, and shipping that are commensurate with the requirements specified in Supplement 13S-1 of NQA-1 to prevent damage or loss and to minimize deterioration of QL-1F items.***

UUSA Response to RAI 4.K- Handling, Storage, and Shipping

Through consideration of Handling, Storage, and Shipping activities for the QL-1F

Program, UUSA has determined that Handling, Storage, and Shipping requirements for the QL-1F program will be in accordance with Section 13 of the QAPD. As such, the QAPD submitted for the QL-1F program, Section 23.13 will be revised to state, "Handling, Storage, and Shipping requirements for the QL-1F Program shall be in accordance with Section 13 of the QAPD".

NRC RAI 4.L- Inspection, Test, and Operating Status

1. ***Please describe controls that will be implemented to identify the inspection, test, and operating status of QL-1F items. Please include controls for (1) indicating the status of inspection and test activities either on the items or in documents traceable to the items to assure that required inspections and tests are performed and to assure that items which have not passed the required inspections and tests are not inadvertently installed, used, or operated; (2) maintaining status of items through indicators, such as physical location and tags, markings, shop travelers, stamps, inspection records, or other suitable means; (3) ensuring that the application and removal of tags, markings, labels, and stamps is performed only by individuals who are qualified to do so; and (4) providing for indicating the operating status of systems and components, such as by tagging valves and switches, to prevent inadvertent operation.***

2. ***Please provide an explanation of the intent of providing requirements for testing and test procedures in Section 23.14 of the QAPD rather than controls for indicating inspection, test, and operating status.***

UUSA Response to RAI 4.L- Inspection, Test, and Operating Status

Through consideration of Inspection, Test, and Operating Status activities for the QL-1F Program, UUSA has determined that Inspection, Test, and Operating Status requirements for the QL-1F program will be in accordance with Section 14 of the QAPD. As such, the QAPD submitted for the QL-1F program, Section 23.14 will be revised to state: "Inspection, Test, and Operating Status requirements for the QL-1F Program shall be in accordance with Section 14 of the QAPD".

Enclosure 2: LAR 10-08 Revised Sections 1.2, 3.1.3 and QAPD Section 23 Replacement Pages

License Amendment Request (LAR-10-08)
Background, Proposed Changes, Technical Analysis of Proposed Changes, Safety Significance

1 Introduction

1.1 Purpose

This document describes proposed changes to the Materials License SNM-2010 to authorize changes to the Quality Assurance Program Description (QAPD), and related changes in the SAR, to add a new QL-1F (Fire Protection) graded quality assurance level for fire protection features designated as IROFS for fire prevention and mitigation. This amendment also requests a modification to Materials License Condition 28, *Basic Component*, to define the applicable requirements for the procurement of a fire protection basic component, and align the Materials License with the nuclear power philosophy for fire protection.

1.2 Background

The objective of this License Amendment Request (LAR) is to change the QAPD to add a new graded quality assurance program designated QL-1F applicable to fire protection features designated as IROFS that would ensure that the applicable quality assurance provisions are applied to the IROFS fire protection features~~systems~~ utilized at UUSA. ~~are commensurate with the nuclear power industry. This level of quality has been accepted in the industry and demonstrated to provide an acceptable level of reliability.~~

- Through the application or inclusion of such designated IROFS into a graded Quality Level 1F program, UUSA would be able to directly procure a basic component (as defined by License Condition 28) from a commercial entity if: (1) the system, structure or component is manufactured to an established, acceptable national code or standard that includes some independent product endorsements based on qualification testing or periodic testing of selected characteristics of the component; and (2) the acceptability of the item's manufacture, testing, and/or certification has been reviewed and verified by UUSA prior to use as a basic component. These systems will meet the applicable requirements of the International Fire Code, the International Building Code (IBC), and the National Fire Protection Association (NFPA) in accordance with the NEF Code of Record, in Table 3.0-1 of the Integrated Safety Analysis Summary (ISAS). Fire rated features that are not specifically tested as identified in UL, ASTM, or NFPA are to be evaluated to be equivalent in performance to a nationally recognized fire standard. Under this proposed change the QL-1F designated IROFS would remain unaltered and their associated fire protective features would still be used to prevent the same accident sequences identified in the current ISAS. However, these IROFS would be subject to revised quality assurance requirements, as detailed in the revised QAPD (see Enclosure 2 for

- The automatic closure feature of these doors will be achieved through self closing/latching devices and periodic inspections to ensure they remain closed; or the use of fire watches will be required as a compensatory measure, when doors are left open during plant operations/maintenance. These doors will be inspected and maintained as required by the NFPA, other applicable standards or procedures, and the UUSA Fire Safety Management Program.

- Fire Dampers:

  - Fire dampers have been procured to meet the NFPA and other applicable standards for fire protection, and installed in accordance with manufacturer's requirements. Fire dampers will be equipped with fusible links to comply with automatic closure requirements. These fire dampers will be inspected and maintained as required by the NFPA, other applicable standards or procedures, and the UUSA Fire Safety Management Program.

- Rollup doors:

  - The UF_6 Handling Area of the SBM contains two rollup doors for the movement of transport cylinders to/from feed, product and tails stations. Fusible links that are UL-listed (fire rated) are installed at the doors (both sides) to provide for the automatic closure requirements of the IROFS. These fusible links will be installed in accordance with manufacturer's requirements. These doors and fusible links will be inspected and maintained as required by the NFPA, other applicable standards or procedures, and the UUSA Fire Safety Management Program.

- Isolation Valves and Dampers:

  - Current plans are to install a combination of UL-listed or UL-certified air-operated isolation valves and dampers to isolate GEVS, and to install air operated valves to isolate compressed air and nitrogen.

3.1.3 Conclusions

These design features and requirements are consistent with requirements imposed on fire protection features for nuclear facilities licensed under 10 CFR Part 50. The inclusion of these requirements under the QL-1F quality assurance program, exclusively for fire protection features designated as IROFS, will add additional rigor and regulatory oversight to ensure the prevention of fires, that if not accomplished could lead to UF_6 releases in excess of the performance requirements of 10 CFR 70.61. The QL-1F quality assurance program is a graded approach applied to the fire protection program's quality assurance based on facility's risk as described in the Safety Analysis Report (Section 3 and 7).~~commensurate with the establishment of fire protection programs as detailed in Regulatory Guide 1.189 (Fire Protection for Operating Nuclear Power Plants).~~

SECTION 23.1 ORGANIZATION

The Organization requirements for the QL-1F Program shall be in accordance with Section 1 of the QAPD.

SECTION 23.2 QUALITY ASSURANCE PROGRAM

The QA Program for the QL-1F Program shall be in accordance with the requirements of Section 2 of the QAPD.

SECTION 23.3 DESIGN CONTROL

Design Control for the QL-1F Program shall be in accordance with the requirements of Section 3 of the QAPD.

SECTION 23.4 PROCUREMENT DOCUMENT CONTROL

The elements of the LES QA Program described in this section and associated procedures implement the requirements of Criterion 4, Procurement Document Control, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 4 and Supplement 4S-1 of NQA-1-1994.

Applicable design bases and other requirements necessary to assure adequate quality shall be included or referenced in procurement documents for items and services.

Basic components for use in QL-1F will be procured as QL-3 with the procurement document stipulating the requirement for the material to meet one or more applicable fire protection industry standards.

Procurement Document Content

LES procurement documents issued for QA Level 1F (QL-1F) items or services shall include the following provisions, as applicable to the procured material, equipment or service as described in approved procedures controlled under the QAPD:

- Statement of the scope of work to be performed by the supplier.
- Technical requirements including:
  - Design bases, identified or referenced in the procurement documents.
  - Specific documents (such as drawings, codes, standards, regulations, procedures or instructions) describing the technical requirements of the material, equipment or services to be furnished, shall be specified along with their revision level or change status.
  - Tests, inspections or acceptance requirements that LES will use to monitor and evaluate the performance of the supplier shall be specified.

Quality Assurance Program requirements including:

- Right of access to supplier, including subtier, facilities and records for inspection or audit by LES, or other designee authorized by LES.
- Provisions for establishing witness/inspection hold points beyond which work cannot proceed by the supplier without LES QA Manager authorization. The Procurement Director may also establish hold points indicating work that cannot proceed without authorization by the Procurement Director.
- Provisions for documentation required to be submitted to LES for information, review or acceptance shall be identified along with a document submittal schedule. Record retention times, disposition requirements and record maintenance responsibilities shall be identified for documentation that will become quality assurance records.
- Provisions for identifying spare and replacement parts or assemblies and the appropriate delineation of technical and quality assurance data required for ordering these parts or assemblies.

Procurement Document Review and Approval

Procurement document reviews shall be performed and documented before issuing the procurement documents to the supplier. A review of the procurement documents and any changes thereto shall be made to verify that documents include all applicable requirements specified under Section 23.4, Procurement Document Content, above and contain appropriate provisions to ensure that material, equipment or services will meet the governing requirements.

Procurement Document Change

Changes to the scope of work, technical requirements, quality assurance program requirements, right of access, and lists of spare and replacement parts delineated in procurement documents, shall be subject to the same degree of control as used in the preparation of the original procurement document.

SECTION 23.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

The Instructions, Procedures, and Drawings for the QL-1F Program shall be in accordance with the requirements of Section 5 of the QAPD

SECTION 23.6 DOCUMENT CONTROL

Document Control for the QL-1F Program shall be in accordance with the requirements of Section 6 of the QAPD.

SECTION 23.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

The elements of the LES QA Program described in this section and associated procedures implement the requirements of Criterion 7, Control of Purchased Material, Equipment and Services, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 7 and Supplement 7S-1 of NQA-1-1994 Part I as revised by NQA-1a-1995 Addenda of NQA-1-1994. See Section 4 Procurement Document Control for specific LES exemptions to 10 CFR 21.3 for the definitions of "commercial grade item", "basic component", "critical characteristics", "dedicating entity", and "dedication".

LES procurement of material, equipment and services is controlled to assure conformance with specified requirements. These controls include requirements for pre-award evaluations of suppliers' QA programs, annual evaluations, periodic audits/source inspections and surveillance. Suppliers with a LES approved QA program are placed on the LES ASL prior to the item or service being accepted. Source inspections and surveillances, evaluation of objective evidence of quality furnished by the supplier, maintaining the ASL, as well as, examination of received items and services are the responsibility of LES QA organization and are performed, as necessary, upon delivery or completion to ensure requirements specified in procurement documents are met. Supplier evaluations, annual evaluations, audits, surveillances, source inspections and receipt inspections shall be documented.

PROCUREMENT PLANNING

LES procurements shall be planned and documented to ensure a systematic approach to the procurement process exists and supports the schedule. Procurement planning shall be performed in accordance with Supplement 7S-1 Section 2 of NQA-1-1994 as defined in approved procedures controlled under the QAPD. Procurement planning shall be accomplished as early as possible, but no later than at the start of those procurement activities that are required to be controlled to assure interface compatibility and a uniform approach to the procurement process.

These actions will be performed relative to the level of importance, complexity and quantity of the item or service being procured and the supplier's quality performance.

Procurement planning shall include the involvement of the LES QA organization to ensure that the QA requirements have been properly identified.

SOURCE EVALUATION AND SELECTION

Supplier selection shall be based on an evaluation, performed before the contract and/or purchase order is awarded, of the supplier's capability to provide items or services in accordance with procurement document (technical and quality) requirements.

PROPOSAL/BID EVALUATION

For proposals and bids, technically qualified personnel from the Procurement or other affected/involved organizations shall perform an evaluation to determine if the proposal/bid meets procurement document requirements. As a minimum, this evaluation shall review the following subjects consistent with the importance, complexity and quantity of items or services being procured:

- Technical considerations
- QA program requirements
- Supplier personnel qualifications
- Supplier production capability and past performance
- Alternatives and exceptions

Before the contract is awarded, the Procurement Director, or other affected/involved organization manager shall resolve, or obtain commitments to resolve, unacceptable quality conditions identified during the proposal/bid evaluation.

SUPPLIER PERFORMANCE EVALUATION

The LES Procurement Director shall establish measures to routinely interface with the supplier and to verify supplier performance. The measures shall include:

- Establishing an understanding between LES and the supplier of the requirements and specifications identified in procurement documents.
- Requiring the supplier to identify planning techniques and processes to be used in fulfilling procurement document requirements.
- Reviewing supplier documents that are prepared or processed during work performed to fulfill procurement requirements.
- Identifying and processing necessary change information.
- Establishing the method to be used to document information exchanges between LES and supplier.

The extent of LES verifications shall be a function of the relative importance, complexity/quantity of items or services being procured and the supplier's quality performance. Records, receiving inspections, nonconformances, dispositions, waivers, and corrective actions shall be maintained in accordance with the requirements of Section 17, Quality Assurance Records.

CONTROL OF SUPPLIER GENERATED DOCUMENTS

Supplier generated documents shall be controlled, processed and accepted by LES in accordance with the requirements established in the applicable procedures. Measures shall be implemented to ensure that the submittal of supplier generated documents is accomplished in accordance with the procurement document requirements. These measures shall also provide for the acquisition, processing and recorded evaluation of technical, inspection and test data compared against the acceptance criteria.

CONTROL OF CHANGES IN ITEMS OR SERVICES

LES shall establish contractual controls with suppliers to ensure that changes in procurement documents are controlled and documented in accordance with this QAPD.

ACCEPTANCE OF ITEMS OR SERVICES

Methods for accepting supplier furnished material, equipment or services shall include one or more of the following, as appropriate to the items or services being procured:

- Evaluating the supplier certificate of conformance,
- Performing one or a combination of receiving inspection or post-installation test,
- Technical verification of the data produced (services only),
- Review of objective evidence for conformance to procurement requirements (services only).

The supplier shall verify that furnished material, equipment or services comply with LES' procurement requirements before offering the material, equipment or services for acceptance and shall provide to LES objective evidence that material, equipment or services conform to procurement documents. Where required by code, regulations or contract provisions, documentary evidence that items conform to procurement documents shall be available at the site prior to installation or use.

RECEIVING INSPECTION

When receiving inspection is used to accept an item:

- The inspection shall consider any source verifications/audits and the demonstrated quality performance of the supplier.
- The inspection shall be performed in accordance with established inspection procedures.
- The inspection shall verify, as applicable, proper configuration; identification; dimensional, physical and other characteristics; freedom from shipping damage; and cleanliness.
- The inspection shall be planned and executed according to the requirements of Section 10 Inspection.
- Receiving inspection shall be coordinated with a review for adequacy and completeness of any required supplier documentation submittals.

POST-INSTALLATION TESTING

When post-installation testing is used as a method of acceptance the affected/involved LES organization manager and the supplier, when possible, shall mutually establish test requirements and acceptance documentation. The LES –Design Authority is ultimately responsible for ensuring appropriate test requirements and acceptance documentation are established."

SECTION 23.8 IDENTIFICATION AND CONTROL MATERIALS, PARTS AND COMPONENTS

The elements of the LES QA Program described in this section and associated procedures implement the requirements of Criterion 8, Identification and Control of Materials, Parts and Components, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 8 and Supplement 8S-1 of NQA-1-1994 Part I as revised by NQA-1a-1995 Addenda.

Basic components for use in QL-1F will be procured as QL-3 with the procurement document stipulating the requirement for the material to meet one or more applicable fire protection industry standards.

The controls necessary to ensure that only correct QL-1F items are used or installed will be required by the appropriate QA procedure. Identification requirements for materials, parts and components are stated in design specifications, drawings, and procurement documents. Specific identification requirements are as follows.

- Identification markings, when used shall be applied using materials and methods which provide a clear and legible identification and do not detrimentally affect the function or service life of the item. Markings shall not be obliterated or hidden by surface treatments or coatings unless other means of identification are substituted.
- Documentation is maintained throughout fabrication, erection, installation, or use.
- Sufficient precautions shall be taken to preclude identifying materials in a manner that degrades the function or quality of the item being identified.

Control of material, parts and components is governed by approved procedures. Specific control requirements include the following.

- Identification of nonconforming or rejected materials, parts or components to ensure that they are not inadvertently used.
- Verification of correct identification of materials (including consumable materials or items with a limited shelf life), parts, and components shall be required to prevent the use of incorrect or defective items.
- Receipt inspection to ensure that materials, parts or components are properly identified and that supporting documentation is available as required by procurement specifications.
- Maintaining and replacement of markings and identification records due to damage during handling, aging or environmental exposure.

SECTION 23.10 INSPECTION

Inspection requirements for the QL-1F Program shall be in accordance with Section 10 of the QAPD

SECTION 23.11 TEST CONTROL

Following installation, modification, repair, or replacement of fire protection equipment, material or components, sufficient testing is performed to demonstrate satisfactory in-service performance pursuant to the specified design criteria. This testing is in accordance with the requirements of Section 11 of the QAPD. Written test procedures are prepared by the responsible engineer group and incorporate the requirements and acceptance limits contain in the applicable design documents.

SECTION 23.13 HANDLING, STORAGE, AND SHIPPING

Handling, Storage, and Shipping requirements for the QL-1F Program shall be in accordance with Section 13 of the QAPD

SECTION 23.14 INSPECTION, TEST, AND OPERATING STATUS

Inspection, Test, and Operating Status requirements for the QL-1F Program shall be in accordance with Section 14 of the QAPD