DOCUMENT REVIEW/APPROVAL

Document: X-SPP-Z-00002 **Revision:** 5

Document Type: SPP

Title: SPECIFICATION FOR PROCUREMENT OF THERMALLY BENEFICATED CLASS F FLY ASH FOR SPF

Description: The Supplier shall supply thermally beneficiated Class F Fly ash delivered to the Saltstone Facility at Savannah River Site with a Certificate of Analysis to ASTM C-618, chemical properties per Table 1 and physical properties per Table 2, with the following exception: compressive strength testing not required. Fly ash temperature must be less than or equal to 50 degrees C at time of loading. No other supplementary physical requirements are needed. Requirements for effectiveness in contribution to sulfate resistance, under Table 3, are not required. Material also to be thermally beneficiated via the CBO or STAR process only.

Amendments:

Originator: NORRIS, PHILLIP W **Date:** 12/12/2012

REVIEW

Contributing Reviewers	Org	Date
1. N/A		12/12/2012
2. N/A		12/12/2012
3. N/A		12/12/2012
4. N/A		12/12/2012
5. N/A		12/12/2012
6. N/A		12/12/2012
7. N/A		12/12/2012
8. N/A		12/12/2012
9. N/A		12/12/2012
10. N/A		12/12/2012

APPROVAL

Approvers	Org	Date
1. LEITA, JEFF N	WRJ100	12/13/2012
2. NORRIS, PHILLIP W	WRJ100	12/13/2012
3. KUNIS, HERMAN J, JR	WRL210	12/13/2012
4. N/A		12/13/2012
5. N/A		12/13/2012
6. N/A		12/13/2012
7. N/A		12/13/2012
8. N/A		12/13/2012
9. N/A		12/13/2012
10. N/A		12/13/2012

VERIFIER/CHECKER

Verifier/Checker: PAULDING, WILLIAM S **Date:** 12/12/2012

DESIGN AUTHORITY

Design Authority: NORRIS, PHILLIP W **USQS Required:** YES

Date: 12/13/2012 **TRP Number:** USQ-SS-2012-00423

CLASSIFICATION

UNCLASSIFIED - Does Not Contain Unclassified Controlled Nuclear Information

DC/RO: N/A

Date: 12/13/2012

Guidance / Exemption:

UNCLASSIFIED
DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

ADC & Reviewing Official: _____ (Name and Title)

Date: November 20, 2013

When separated from the referenced document, this coversheet is : UNCLASSIFIED

OSR 45-10# (Rev 4-10-2002)

Procurement Specification Cover Sheet

1. Title		
Specification for Procurement of Thermally Beneficiated Class F Fly Ash for SPF (U)		
Technical Review Number: USQ-SS-2012-00423		
2. Specification No. X-SPP-Z-00002	3. Revision 5	4. Page 1 of 12
5. Functional Classification PS	6. Requester Department Saltstone Engineering	7. Requester Division SRR Engineering

8. Cognizant Technical Function	
Name Phillip Norris Approvals Maintained in DCR/EDWS	Date
Title System Engineer	
Department Saltstone Engineering	
9. Additional Reviewer (Verifier/Checker)	
Name Will Paulding Approvals Maintained in DCR/EDWS	Date
Title System Engineer	
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Title Quality Assurance Engineer	
Department Quality Assurance	
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Title Manager, Saltstone Engineering	
Department Waste Solidification ENG	
12. Other Reviewer	
Name Tony Hayes Approvals Maintained in DCR/EDWS	Date
Title Procurement Specification Authority	
Department Engineering Processes	

OSR 45-9# (Rev 12-28-95)

Standard Procurement Specification Revision History Sheet

1. Specification No X-SPP-Z-00002	2. Revision 5	3. Page Page 2 of 12

4. Date	5. Revision No.	6. Paragraph No.	7. Description of Changes
10/08/2008	0	All	Initial Issue
11/17/2008	1	3.1, 3.8.2	Deleted ASTM revision requirements
		3.9	Removed trucker weight specifications
		4.1	Added SRS witness points.
3/14/2009	2	3.8.1	Changed cleanliness requirements
		3.8.2	Added requirements to be added to the COA
1/19/2011	3	All	Changed WSRC to SRS, and Washington Savannah River Company to Savannah River Site
		2.2	Added additional codes/regulations/standards
		3.4	Updated QA Requirements
		Attachment 3	Updated SQAPR form
		3.8.2	Added compressive strength testing not required
		3.8.4	Added inspection of Truck Hoses
		3.8.4	Addition of muffler to the PTO blower
2/10/2011	3	4.1	Deleted witness points
5/1/2012	4	All	Added “Thermally Beneficiated” to material name and deleted CBO (Carbon Burnout) from material name.
12/2012	5	2.1, 3.1, 3.4, & 3.8	Added requirements related to Thermally Beneficiated requirements in terms of CBO and STAR

TABLE OF CONTENTS

1.0 SCOPE

1.1 General Description of the Item

The Supplier shall supply thermally beneficiated Class F Fly ash delivered to the Saltstone Facility at Savannah River Site with a Certificate of Analysis to ASTM C-618, chemical properties per Table 1 and physical properties per Table 2, with the following exception: compressive strength testing not required. Fly ash temperature must be less than or equal to 50 degrees C at time of loading. No other supplementary physical requirements are needed. Requirements for effectiveness in contribution to sulfate resistance, under Table 3, are not required.

2.0 REFERENCES

2.1 Definitions

Batch / Lot	A uniform quantity of material processed or produced
COA	Certificate of Analysis
CBO	Carbon Burn-Out (Process for making thermally beneficiated Class F fly ash)
EDR	Engineering Document Requirements
QVDR	Quality Verification Documentation Requirements
SDDR	Supplier Deviation Disposition Request
SRS	Savannah River Site
SSR	Supplier Surveillance Representative
STAR	Staged Turbulent Air Reactor (Process for making thermally beneficiated Class F fly ash)
Supplier	An awardee of this contract

2.2 Codes/Standards/Orders/Regulations

The following codes, standards, and regulations apply to the extent identified in this procurement specification. Supplier use of any other edition, revision, or issue than specified requires the SRS's approval:

- *ASTM C-618-08 Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
- *ASTM C-311-07 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
- DOT Hazardous Material Regulations, Title 49 (49 CFR), Parts 171 through 180.
- ASME NQA-1-2000, Quality Management Systems - Requirements.
- ANSI/ISO/ASQ Q9001 2000 or 2008, Quality Management Systems – Requirements.
- ANSI/ASQC E4-2004, Quality Systems for Environmental Data and Technology Programs.

* For those codes and standards identified with asterisks (*), other edition date and or addenda may be used if there is no functional change in the properties of the material type specified to be used. The Supplier is responsible for making this determination.

2.3 Applicable Documents

- SRS Form OSR 45-4, Supplier Deviation Disposition Request (SDDR)
- SRS Form OSR 45-4A, Instructions

3.0 ITEM REQUIREMENTS

The item requirements for the thermally beneficiated Class F Fly Ash shall not be changed without consultation with subject matter experts at SRS. It is important that any changes to the item requirements be evaluated with respect to impact on thermally beneficiated Class F Fly Ash performance as well as impacts to downstream processes.

3.1 Performance Requirements

3.1.1 The supplier shall provide thermally beneficiated Class F Fly Ash that meets the following chemical and physical requirements:

3.1.1.1 Chemical Requirements

The thermally beneficiated Class F Fly Ash shall conform to the requirements as to chemical composition prescribed in Table 1 of ASTM C-618.

3.1.1.2 Physical Requirements

The thermally beneficiated Class F Fly Ash shall conform to the requirements to the physical composition prescribed in Table 2 of ASTM C-618 with the following exception: compressive strength testing is not required.

3.1.1.3 Thermally Beneficiated Process Requirements

Note: If another thermally beneficiated flyash is evaluated and approved for use, the input deck S-CLC-Z-00044 shall be revised prior to revision of specification.

Acceptable thermally beneficiated fly ash processes are Carbon Burn-Out (CBO) and Staged Turbulent Air Reactor (STAR). Other processes may be acceptable, but will require evaluation and approval by SRR. The removal of the ammonia and reduction in carbon content are key aspects of the process. Additives may not be added to the thermally beneficiated fly ash

3.1.2 The supplier shall provide a Certificate of Analysis for each shipment of thermally beneficiated Class F Fly Ash delivered to SRS.

3.1.3 The Supplier shall inspect each shipping container for cleanliness and shall remove all foreign materials found within the shipping container. Shipping containers shall not be loaded if the inner surfaces are wet and/or liquids are present. The Supplier shall supply a Shipping Container Inspection and Validation Report with each shipment.

3.1.4 SRS will notify the supplier of any out-of-specification condition identified by SRS. The supplier shall be required to take back any out-of-specification material at the supplier's expense and replace it with acceptable material.

3.1.5 The supplier shall provide a shipment record (Bill of Lading) for each shipment.

3.2 Design Requirements

There are no design requirements specific to this procurement.

3.3 Service Conditions

The thermally beneficiated Class F Fly Ash will be stored in an outdoor silo and be kept at ambient temperature.

3.4 Quality Requirements

The supplier shall implement his standard commercial Quality Assurance Program during the production of thermally beneficiated Class F Fly Ash for the Saltstone Facility. The supplier may choose to develop his program based on ASME NQA-1, or another recognized QA standard such as, ANSI/ISO/ASQ Q9001, ANSI/ASQC E4, etc. The concrete grout produced by the Saltstone Facility will be used to trap mildly radioactive and hazardous material and is not Safety Related. The Class F fly ash is expected to have chemical and physical properties and manufactured by thermally beneficiated process as defined by the performance requirements of paragraph 3.1 above. A commercial product shipped in a clean truck, with certificate of analysis based on tests as required by paragraph 3.8 is appropriate for this Saltstone use.

The supplier's QA Program or procedures shall describe the supplier's process used to produce a quality product and generate the deliverable documentation required by paragraph 3.8 below. It shall provide information about test methods used, calibration of measurement and test equipment used, and training and qualification of personnel performing tests and approving results. The supplier's record retention process shall be discussed. Deviation requests for nonconforming material are to be processed in accordance with paragraph 3.11 below.

The supplier is to submit his Quality Assurance Program or procedures for review and approval with the bid.

3.5 SRS Furnished Material, Equipment, Services

None

3.6 Schedule

Estimate three trucks per day two days per week of production. SRS (Saltstone Operations/ Facility Support) will schedule the number of truck loads and delivery dates.

3.7 Personnel Qualifications/Certification

Supplier personnel working on production of thermally beneficiated Class F Fly Ash according to this procurement specification shall be trained and qualified according to the requirements of the supplier's quality control program.

3.8 Deliverables (includes submittals)

Items are to be delivered to SRS at the address below:

Savannah River Site
Saltstone Facility
Purchase Order # (See SRS Purchase Order)
Aiken SC 29808

Quality Verification documents, listed in Attachment 2, accompanying thermally beneficiated Class F Fly Ash composite lots shall be submitted to SRS at the time of shipment receipt. Documents shall be itemized according to the listing in Attachment 2. Supplier shall include a copy of the QVDR with each shipment. Envelope shall be marked "Receipt Inspection Documentation".

Attachment 2 includes:

- Material Safety Data Sheet (MSDS) for thermally beneficiated Class F Fly Ash
- Tanker Truck Cleanliness certificate
- Certificate of Analysis of thermally beneficiated Class F Fly Ash
- Shipment Record (Bill of Lading)

This documentation shall be supplied as specified below:

3.8.1 Tanker Truck Cleanliness Certificate

A Certificate of Tanker Truck Cleanliness shall be signed by Supplier attesting to the cleanliness of the Tanker Truck.

Tanker truck cleanliness certificate shall have the following
Information typed or legibly written in black, waterproof ink:
1) SRS P.O. Number
2) Identification of method used to maintain cleanliness
3) Tanker truck number
4) Certification that the tanker truck was cleaned prior to loading
5) Legible signature of the supplier representative

3.8.2 Certificate of Analysis of thermally beneficiated Class F Fly Ash

The Certificate of Analysis (COA) shall be signed by an authorized person of the Supplier's management staff attesting the validity of the reported information. The COA shall have the following information typed or legibly written in black, waterproof ink:

- SRS P. O. Number.
- Description of the material being documented.
- Legible signature of the supplier representative.
- Statement that the material complies with ASTM C618. (compressive strength testing not required)

3.8.3 Shipment Record (Bill of Lading)

At a minimum, the following information is to be included on the Bill of Lading:

- Description of material being shipped (CBO or STAR thermally beneficiated process designation to be included)
- Tanker Seal numbers
- SRS P.O. Number
- Supplier Ticket Number
- Supplier Trailer Number
- Legible signature of the supplier representative

3.8.4 Certificate of Analysis of Raw Materials

There is no Certificate of Analysis (COA) of Raw Materials required for the procurement of this material.

3.8.5 Delivery Instructions for thermally beneficiated Class F Fly Ash

Inspect truck hoses to assure no debris are present prior to transferring to silos.

After shipping containers are loaded, openings into each container shall be closed and sealed using seals to prevent tampering or the inadvertent leakage of rainwater. At a minimum, seals shall be affixed to loading hatches and discharge ports.

Thermally beneficiated Fly ash shall be delivered in standard truck tankers that are pneumatically discharged through a typical 4" I.D. pipe, by a PTO blower with a muffler mounted on the truck. Truck mounted PTO blowers with a muffler shall have a minimum capacity of 725 ICFM @ 16 psig, by design. The Supplier/Vender may use blowers with a muffler with a capacity of 550 ICM @ 16 psig, if the Supplier/Vender accepts full responsibility for unsuccessful evolutions to unload the thermally beneficiated Fly ash.

Disruptions or plugging during off-loading due to truck equipment problems shall be the sole responsibility of the Supplier/Vender.

3.8.6 All transmittals, EDR submittals, SDDR correspondence document shall be sent to:

Savannah River Site
Document Control Center, Bldg. 704-1N
Aiken, SC 29808
Purchase Order (See SRS Purchase Order)

3.8.7 All transmittals, submittals, and correspondence shall be uniquely identified and reference the following information:

Supplier's Order Number
SRS Purchase Order Number
Project Number: (See SRS Purchase Order)
Project Title (See SRS Purchase Order)

3.8.8 All other communications shall be directed to:

Savannah River Site
Building 730-4B
Aiken, SC 29808
Attention: Procurement Representative (Name to be provided at time of award)

3.8.9 Engineering Document Requirements (EDR), Attachment 1, shall be submitted prior to start of work.

Attachment 1 includes:

1) Supplier's Quality Control Program (Section 3.4).

2) Certificate of Analysis of thermally beneficiated Class F Fly Ash.

3.8.10 Engineering documents will be reviewed and processed by SRS within 10 calendar days from the date of receipt. The documents will be returned to the supplier with the status as follows:

Status 1: Work may proceed
Status 2: Submit final documentation. Work may proceed
Status 3: Revise and resubmit. Work may proceed subject to resolution of indicated comments.
Status 4: Revise and resubmit. Work may not proceed.
Status 5: Permission to proceed not required.

3.8.11 The supplier shall incorporate changes, as required per SRS comments, and resubmit corrected Engineering Documents for review within **10** calendar days from the date of receipt. The supplier shall not change Status 1 Engineering Documents without notifying SRS and resubmitting the Engineering documents.

3.8.12 The Supplier shall retain copies of the following documents for the production of the thermally beneficiated Class F Fly Ash for a minimum of three years from the date of shipment:

a) Certificates of Analysis.
b) Contract documents including this specification and any associated SDDRs.
c) Engineering or quality documents required as submittals by this specification.
d) Any log, test, examination, nonconformance, etc. document generated for this specification and not required as a submittal.
e) Any other documents identified in this specification for retention.

All retained records shall be accessible to SRS upon request. Disposition of record copies after the retention period shall be in accordance with the Supplier's records management program.

If the delivered thermally beneficiated Class F Fly Ash does not meet the procurement specification per this document, and the Supplier wishes to rework it to the specifications, he shall submit a written rework plan along with a SDDR to SRS for approval prior to implementing the plan. SRS reserves the right to refuse to accept any thermally beneficiated Class F Fly Ash that has been reworked without written approval from SRS.

3.8.13 The use of 100% recycled paper for engineering submittals is strictly prohibited. Recycled content up to 25% is acceptable.

3.9 Packaging, Handling, Shipping, and Storage Requirements

3.9.1 Packaging for Shipment

The thermally beneficiated Class F Fly Ash shall be delivered in clean tanker trucks.

The supplier shall be responsible for inspecting each tanker truck before filling to ensure that it is clean, contains no debris, visible liquid or other contamination. The Supplier shall include a tanker truck cleanliness certificate with the shipment as required in Section 3.8.1 above.

3.9.1.1 Verification of Tanker Truck Cleanliness

A signed statement that each of the tanker trucks used to store and delivery the thermally beneficiated Class F Fly Ash was clean of all contaminants is required with the shipment.

3.9.2 Handling

The Supplier shall be responsible for the tanker trucks until the finished product is delivered to SRS.

3.9.3 Storage

The thermally beneficiated Class F Fly Ash shall be stored in a manner to prevent water intrusion.

3.9.4 Shipping

The thermally beneficiated Class F Fly Ash shipped in tanker trucks shall be in accordance with the DOT Title 49 regulations.

3.9.5 Savannah River Site Access

Trucks without badged drivers must report to the Badging Facility located on Savannah River Site Road “A-1” to receive a badge before entering the Site Gate located on Hwy 19. The badging process will take an additional 60-90 minutes at the Site. Drivers not receiving a permanent badge must also report to the

Badging Facility to receive a temporary badge and will require an escort at all times while on the Savannah River Site.

3.10 Marking and Identification Requirements

3.10.1 Each tanker truck shall be clearly marked in accordance with the DOT Title 49 regulations.

3.10.2 Supplier shall provide instructions, if any, for storage and use of the thermally beneficiated Class F Fly Ash at the SRS facility.

3.11 Deviations

3.11.1 After procurement has been awarded, the Supplier shall submit to SRS, for review and approval, a “Supplier Deviation Disposition Request” (SDDR) form for each exception taken to this specification. Whenever the Supplier identifies a nonconforming condition for which the Supplier’s recommended disposition is “use-as-is” or “repair”, the Supplier shall also document the condition using the SDDR form. The Supplier shall submit SDDR forms to SRS Document Control, for review and approval, as stated in the Deliverables Section (Section 3.8.6).

3.11.2 For each exception, the Supplier shall:

1) Identify the specification and revision number;
2) Identify the criteria that cannot be met by item and section number;
3) Present an explanation for the deviation,
4) Present a proposal for resolution of the deviation and,
5) Present a price adjustment for resolution of the deviation.

3.11.3 The Supplier shall not perform any work or make delivery of any item for which an SDDR is submitted until written authorization is received from SRS. A nonconformance shall be identified on a SDDR. Supporting technical justification shall be included when requesting approval of a “Use-as-is” or “Repair (Rework)” disposition from SRS.

4.0 ACCEPTANCE OF ITEM

4.1 SRS Surveillance and Audits

SRS shall be provided reasonable access to the Supplier's facilities for the purposes of inspections, surveillances, and audits. Accessibility includes reviewing, monitoring, and auditing of contracted in-progress work, including associated documentation.

4.2 Final Acceptance Method

Prior to unloading the shipment, SRS Receiving Inspection (RI) will grant final acceptance after the following is confirmed:

- All documentation, as listed in Section 3.8 has been received, reviewed, and accepted.
- The quantity of thermally beneficiated Class F Fly Ash ordered.

5.0 ATTACHMENTS

1. Engineering Documents Requirements Form with Instructions (2 pages)
2. Quality Verification Document Requirements Form with Instructions (2 pages)
3. Supplier Quality Assurance Program Requirements (1 page)

OSR 45-6B# (Rev 8-27-91)

Engineering Document Requirements

Attachment No. 1
Revision No. 5
Spec/Req'n No. X-SPP-Z-00002
Page 1 of 2.

1. Document Category Number	2. Specification Paragraph Reference	3. Document Description	4. Permission to Proceed Required		5. Submittal Schedule	6. Quantity Required		7. Kind of copies	8. Remarks
			Yes	No		Init	Final		
8.0	3.8.5	COA for thermally beneficiated Class F Fly Ash	x		Prior to shipment	1	1	Reprod.	
6.0	3.4	Supplier's Quality Assurance Program	x		Prior to award	1	1	Reprod.	

OSR 45-6A# (Rev 8-27-91)

Attachment No. 1
Revision No. 5
Spec/Req'n No. X-SPP-Z-00002
Page 2 of 2

Engineering Document Requirements Form Instructions

Purpose The Engineering Document Requirements (EDR) form is prepared by the originator, establishes a basis for actions required of a Supplier and provides the schedule for the submittal of engineering documents by the Supplier.

Legend Entry No. — **Information Required**

1 Document category number – see below.
2 Applicable specification number and appropriate paragraph.
3 Description corresponding to document category number.
4 Permission to proceed with fabrication or other specific processes is marked yes, if required.
5 List a milestone after award i.e., prior to fabrication, prior to test, prior to shipment, or with shipment that the listed document is to be submitted by Supplier.
6 Number of copies required for submittal.
7 Reproducible, Mylar, Vellum, etc.
8 Enter remarks when appropriate.

Document Category Number and Descriptions

1.0 Drawings
- 1.1 Outline Dimensions, Services, Foundations and Mounting Details – Drawings providing external envelope, including lugs, centerline(s), location and size for electrical cable, conduit, fluid, and other service connections, isometrics and details related to foundations and mountings.
- 1.2 Assembly Drawings – Detailed drawings indicating sufficient information to facilitate assembly of the component parts of an equipment item.
- 1.3 Shop Detail Drawings – Drawings which provide sufficient detail to facilitate fabrication, manufacture, or installation. This includes pipe spool drawings, internal piping and wiring details, cross-section details and structural and architectural details.
- 1.4 Wiring Diagrams – Drawings which show schematic diagram equipment, internal wiring diagrams, and interconnection wiring diagram for electrical items.
- 1.5 Control Logic Diagrams – Drawings which show paths which input signals must follow to accomplish the required responses.
- 1.6 Piping and Instrumentation Diagrams – Drawings which show piping system scheme and control elements.

2.0 Parts Lists and Costs – Sectional view with identified parts and recommended spare parts for one year's operation and specified with unit cost.

3.0 Complete SRS Data Sheets – Information provided by Supplier on data sheets furnished by SRS.

4.0 Instructions
- 4.1 Erection/Installation – Detailed written procedures, instructions, and drawings required to erect or install material or equipment.
- 4.2 Operations – Detailed written instructions describing how an item or system should be operated.
- 4.3 Maintenance – Detailed written instructions required to disassemble, reassemble and maintain items or systems in an operating condition.
- 4.4 Site Storage and Handling – Detailed written instructions, requirements and time period for lubrication, rotation, heating, lifting or other handling requirements to prevent damage or deterioration during storage and handling at jobsite. This includes shipping instruction for return.

5.0 Schedules: Engineering and Fabrication/Erection – Bar charts or critical path method diagram which detail the chronological sequence of activities, i.e., Engineering submittals, fabrication and shipment.

6.0 Quality Assurance Manual/Procedures – The document(s) which describe(s) the planned and systematic measures that are used to assure that structures, systems, and components will meet the requirements of the procurement documents.

7.0 Seismic Data Reports – The analytical or test report which provides information and demonstrates suitability of material, component or system in relation to the conditions imposed by the stated seismic criteria.

8.0 Analysis and Design Reports – The analytical data (stress, electrical loading, fluid dynamics, design verification reports, etc.) which demonstrate that an item satisfies specified requirements.

9.0 Acoustic Data Reports – The noise, sound and other acoustic vibration data required by the procurement documents.

10.0 Samples
- 10.1 Typical Quality Verification Documents – A representative data package which will be submitted for the items furnished as required in the procurement documents.
- 10.2 Typical Material Used – a representative example of the material to be used.

11.0 Material Descriptions – The technical data describing a material which a Supplier proposes to use. This usually applies to architectural items, e.g., metal siding, decking, doors, paints, coatings.

12.0 Welding Procedures and Qualifications – The welding procedure, specification and supporting qualification records required for welding, hard facing, overlaying, brazing and soldering.

13.0 Material Control Procedures – The procedures for controlling issuance, handling, storage and traceability of materials such as weld rod.

14.0 Repair Procedures – The procedures for controlling materials removal and replacement by welding, brazing, etc., subsequent thermal treatments, and final acceptance inspection.

15.0 Cleaning and Coating Procedures – The procedures for removal of dirt, grease or other surface contamination, and preparation and application of protective coatings.

16.0 Heat Treatment Procedures – The procedures for controlling temperatures and time at temperature as a function of thickness, furnace atmosphere, cooling rate and methods, etc.

19.0 UT – Ultrasonic Examination Procedures – Procedures for detecting discontinuities and inclusions in materials by the use of high frequency acoustic energy.

20.0 RT – Radiographic Examination Procedures – Procedures for detecting discontinuities and inclusions in materials by x-ray or gamma ray expose of photographic film.

21.0 MT – Magnetic Particle Examination Procedures – Procedures for detecting surface or near surface discontinuities in magnetic materials by the distortion of an applied magnetic field.

22.0 PT – Liquid Penetrant Examination Procedures – Procedures for detecting discontinuities in materials by the application of a penetrating liquid in conjunction with suitable developing materials.

23.0 Eddy Current Examination Procedures – Procedures for detecting discontinuities in materials by distortion of an applied electromagnetic field.

24.0 Pressure Test – Hydro, Air, Leak, Bubble or Vacuum Test Procedures – Procedures for performing hydrostatic or pneumatic structural integrity and leakage tests.

25.0 Inspection Procedures – Organized process followed for the purpose of determining that specified requirements (dimensions, properties, performance results, etc.) are met.

26.0 Performance Test Procedures – Test performed to demonstrate that functional design and operational parameters are met.
- 26.1 Mechanical Tests – e.g., pump performance, data, valve stroking, load, temperature rise, calibration, environmental, etc.
- 26.2 Electrical Test – e.g., impulse, overload, continuity, voltage, temperature rise, calibration, saturation, loss, etc.

27.0 Prototype Test Reports – Reports of a test which is performed on a standard or typical examination of equipment or item, and which is not required for each item produced in order to substantiate the acceptability of equal items. This may include tests which result in damage to the item(s) tested.

28.0 Personnel Qualification Procedures – Procedures for qualifying welders, inspectors and other special process personnel.

29.0 Supplier Shipping Preparation Procedures – Procedures used by a Supplier to prepare finished materials or equipment for shipment from its facility to the jobsite.

OSR 45-5# (Rev 10-29-2008)

Quality Verification Document Requirements

Attachment No. 2
Revision No. 5
Spec/Req'n No. X-SPP-Z-00002
Page 1 of 2

1. Document Category Number	2. Specification Paragraph Reference	3. Document Description	4. SSR Release	5. SRS Receipt Inspection Check-In	6. Remarks	7. DOC Supplier Page Count
17.1	3.8	MSDS for thermally beneficiated Class F Fly Ash			To be submitted with shipment	
15.0	3.8	Tanker Truck Cleanliness Certificate			To be submitted with shipment	
28.0	3.8	COA for thermally beneficiated Class F Fly Ash			To be submitted with shipment	
N/A	3.8	Shipment Record (Bill of Lading)			To be submitted with shipment	

8. Supplier's Order No.	9. Supplier's Part	10. Supplier's Part Name	11. Quantity
12. PO No.	13. SRS Line/Equip Tag or Code No.	14. SRS Part Name	

15. Supplier's Conformance Statement

We certify that the work and required documents meet the requirements of the procuring documents.

Authorized Supplier Signature | Title | Date

16. Source Surveillance Representative at Supplier's Facility

Work was released based on satisfactory completion of quality surveillance and review of documentation.

☐ With Authorized Deviations Noted in Column 6
☐ No Deviations

Signature of SSR | Date

17. Receiving Inspection at SRS

This form and the quality verification documents referenced hereon have been received and their relationship to the hardware verified.

Signature of SRS Inspector | Date

Purpose The Quality Verification document Requirements (QVDR) is initiated by SRS and completed by the Supplier when providing quality verification documents. The QVDR is a multipurpose form to

Transmit quality verification documents from the Supplier,
Provide evidence of SSR release of documentation and /or work, and
Provide evidence of an SRS inspection check of documentation received at SRS.

SRS Entries

Entry No.	Information Required
1	Enter Document Category Number – see below.
2	Enter Specification Number and Paragraph Reference.
3	Enter Description corresponding to the Document Category Number.
4	SSR to initial upon item release.
6	Enter "Remarks: as appropriate.
16	SSR and dates release.

Field Entries

Entry No.	Information Required
5	SRS inspector at the jobsite to complete check-in.
17	The SRS inspector will review the quality verification documentation package. If found satisfactory, he signs and dates the check-in statement.

Supplier Entries

Entry No.	Information Required
7	Enter number of pages of quality verification document being submitted.
8	Enter information required.
9	Enter information required.
10	Enter information required.
11	Enter the quantity of units covered by the documents submitted. For each item on Entry No. 12 being released, provide a separate copy of this completed form and the supporting quality verification documents.
12	Enter information required.
13	Enter information required.
14	Enter information required.
15	Supplier – Signature of an employee authorized to sign such documents.

Document Category Numbers and Descriptions

12.0 Welding Verification Reports – Reports of welding performed to include weld identification, and certification that qualified welding procedures and welders were used.

13.0 Material Verification Reports – Reports relative to material which confirm, substantiate or assure that an activity or condition has been implemented in conformance with code and material specifications imposed by the procurement documents.

14.0 Major Repair Verification Reports – Reports may include weld repair locations (maps), material test reports for filler metal, pre- and post-weld heat treatment records, NDE records, etc. The resolution of whether a repair is major or not is an SRS responsibility.

15.0 Cleaning and Coating Verification Reports – Reports include a certification of visual examination for surface preparation, surface profile, materials, etc.; and also humidity data, temperature data and coating thickness data as required by the procurement documents.

16.0 Heat Treat Reports – Reports normally include furnace charts and similar records which identify and certify the item(s) treated, the procedure used, furnace atmosphere, time at temperature, cooling rate, etc.

17.0 Material Property Reports

- 17.1 MTR (Material Test Reports) – These reports include all chemical, physical, mechanical, and electrical property test data required by the material specification and applicable codes. These are applicable to cement, concrete, metals, cable jacket materials, rebar, rebar splices, etc.
- 17.2 Impact Test Data – Reports of Charpy or drop weight tests including specimen configuration, test temperature and fracture data.
- 17.3 Ferrite Data – Reports of the ferrite percentage for stainless steel materials used, including castings and welding filler metals as deposited.
- 17.4 Materials Certificate of Conformance – Documents which certify conformance to the requirements of the applicable material specification.
- 17.5 Electrical Property Reports – Reports of electrical characteristics, e.g., dielectric, impedance, resistance, flame tests, corona, etc.

18.0 Code Compliance – Verifying documents (such as data Forms U-1, M-2, State, etc.), which are prepared by the manufacturer or installer and certified by the Authorized Code Inspector.

19.0 UT – Ultrasonic Examination and Verification Reports – Examination results of certain characteristics of discontinuities and inclusions in material by the use of high frequency acoustic energy.

20.0 RT – Radiographic Examination and Verification Reports – Examination results of certain characteristics of discontinuities and inclusions in materials by x-ray or gamma ray exposure of photographic film, including film itself.

21.0 MT – Magnetic Particle Examination and Verification Reports – Examination results of surface (or near surface) discontinuities in magnetic materials by distortion of an applied magnetic field.

22.0 PT – Liquid Penetrant Examination and Verification Reports – Examination results of surface discontinuities in materials by application of a penetrating liquid in conjunction with suitable developing techniques.

23.0 Eddy Current Examination and Verification Reports – Examination results of discontinuities in material by distortion of an applied electromagnetic field.

24.0 Pressure Test – Hydro, Air, Leak, Bubble or Vacuum Test and Verification Reports – Results of hydrostatic or pneumatic structural integrity and leakage tests.

25.0 Inspection and Verification Reports – Documented findings resulting from an inspection.

26.0 Performance Test and Verification Reports – Reports of Test Results

- 26.1 Mechanical Test, e.g., pump, performance data, valve stroking, load, temperature rise, calibration, environment, etc.
- 26.2 Electrical Tests, e.g., load, impulse, overload, continuity, voltage, temperature rise, calibration, saturation, loss, etc.

27.0 Prototype Test Report – Report of the test which is performed on a standard or typical example of equipment, material or item, and which is not required for each item produced in order to substantiated the acceptability of equal items. This normally includes tests which may, or could be expected to, result in damage to the item(s) tested.

28.0 Certificate of Conformance – A document signed or otherwise authenticated by an authorized individual certifying the degree to which items or services meet specified requirements.

19-283 (Rev. 2-8-2011)

Attachment No. 3
Spec/Req No. X-SPP-Z-00002
Revision No 5
Page 1 of 1

Supplier Quality Assurance Program Requirements

Note to the CTF/CQF:

Level 1 - Procurements require verification of the supplier's quality program through the performance of an evaluation or audit that compares against the national or international consensus standard designated in Section A.

Level 2 - Procurements that invoke a supplier quality assurance program, may apply the same consensus standard verification process as designated in Section A, otherwise designate evaluation methods in Section C. (Ref. 1Q, 7-2; 1Q, 18

Section A

National Consensus Standards for Supplier Quality Program Requirements are identified, but not limited, to the ones below:

- ☐ ASME/NQA-1 Part I - Nuclear Quality Assurance Program Requirements (Pages 2-4 must be completed)
- ☐ ISO 17025 (Calibration/Testing Standard)
- ☐ ASME Section VIII Division I (Appendix 10)
- ☐ NQA-1, Part II
  - ☐ 2.1 Fluid/Comp Clean
  - ☐ 2.2 Pack/Slip/Rec/Store/Handle
  - ☐ 2.3 Housekeeping
  - ☐ 2.4 IIT Power/Instr/Control Equipment
  - ☐ 2.5 IIT Con/Steel/Soils/Foundation
  - ☐ 2.7 Software
  - ☐ 2.8 IIT Mechanical
  - ☐ 2.14 CGD
  - ☐ 2.15 Hoist/Rig/Transport
  - ☐ 2.18 Maintenance
  - ☐ 2.20 Subsurface
- ☐ Other _____
- ☐ Other _____

NOTE: When necessary, use an attachment to define additional requirements and/or details.

Section B

Clarifications/Exceptions *(as needed)*

Section C

For Level 2 procurements, methods of evaluating supplier's quality assurance program are:

1. The supplier will provide a copy of their Quality Assurance Manual for an adequacy/concurrence review, and
2. One or more of the boxes marked below will also be applied.
   - ☐ Performance of an audit as defined in Section A
   - ☒ Document submittals identified on EDR document (e.g., process procedures, welder qualifications, etc.)
   - ☐ Submittal of current applicable ASME certificate
   - ☒ Supplier surveillance activities
   - ☒ Receiving Inspection
   - ☐ Other _____
   - ☐ Other _____

Date: 12/13/2012

COMMENT REPORT

COMMENT	DISPOSITION
Document No.: X-SPP-Z-00002	Rev: 5
PAULDING, WILLIAM S —— 12/12/2012 Add attachment 3, Supplier Quality Assurance Program Requirements	NORRIS, PHILLIP W —— 12/12/2012 Add attachment 3, Supplier Quality Assurance Program Requirements
NORRIS, PHILLIP W —— 12/12/2012 Attachment 3 was added.	——
NORRIS, PHILLIP W —— 12/13/2012 Approving for Anthony Hayes as Procurement Specification Authority. See email.	——

END OF COMMENT REPORT