



## SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1 CERTIFICATE/QUALITY ASSURANCE PROGRAM (QAP) HOLDER

EnergySolutions, Spent Fuel Division  
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2 NRC/REGIONAL OFFICE

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REPORT NUMBER(S)

3 CERTIFICATE/QAP DOCKET NUMBER(S)

71-0935

4 INSPECTION LOCATION

Campbell, California

5 DATE(S) OF INSPECTION

12/9-13/13

## CERTIFICATE/QUALITY ASSURANCE PROGRAM HOLDER:

The inspection was an examination of the activities conducted under your QAP as they relate to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your QAP Approval and/or Certificate(s) of Compliance. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☒ 1 Based on the inspection findings, no violations were identified
- ☐ 2 Previous violation(s) closed.
- ☐ 3 The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

\_\_\_\_\_ Non-cited violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

- ☐ 4 During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
- (Violations and Corrective Actions)

## Statement of Corrective Actions

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
CERTIFICATE/QAP REPRESENTATIVE	Richard Byars		12/16/13
NRC INSPECTOR	Jim Pearson		12/16/13
BRANCH CHIEF	Eric Benner		12/17/13

### INSPECTOR NOTES COVER SHEET

Licensee/Certificate Holder (name and address)	EnergySolutions, Spent Fuel Division 2105 South Bascom Ave, Suite 230 Campbell, CA 95008 Phone: (831) 430-5202
Licensee/Certificate Holder contact and phone number	Mr. Richard Byars 803.758.1808 (O)
Docket No.	71-0935
Inspection Report No.	71-0935/2013-202
Inspection Date(s)	December 10-12, 2013
Inspection Location(s)	2105 South Bascom Ave, Suite 230 Campbell, CA 95008
Inspectors	Jim Pearson (Lead), & Rob Temps
Summary of Findings and Actions	<p>The purpose of the inspection was to assess EnergySolutions (ES) compliance with 10 CFR Parts 21 and 72, and to verify that the storage cask(s) which ES is registered as the primary design holder (CoC holder) of, can be verified to comply with Part 72 design requirements. The focus of the inspection was to determine whether ES 10 CFR Part 72 activities are in accordance with their NRC-approved Part 71 QA program.</p> <p>The team assessed that ES-SFD properly implemented their NRC-approved QA Program for the control of designs developed for the VSC-24 Storage Cask. Overall, ES' implementation of their NRC-approved Part 71 QA Program at the Campbell location was assessed to be adequate.</p>
Lead Inspector Signature/Date	Jim Pearson <i>Jim Pearson</i> 1/9/2014
Inspector Notes Approval Section Chief Signature/Date	Eric Benner <i>Jon N. Woodfield for</i> 1/9/2014



## BACKGROUND

On December 10-12, 2013, the NRC performed an inspection at EnergySolutions (ES) Spent Fuel Division (SFD) near Campbell, California. The purpose of the inspection was to assess ES compliance with 10 CFR Parts 21 and 72, and to verify that the storage cask(s) which ES is registered as the primary design holder (CoC holder) of (VSC-24), can be verified to comply with Part 72 design requirements. The focus of the inspection was to determine whether ES' 10 CFR Part 72 activities were in accordance with their NRC-approved Part 71 QA program.

Since the last NRC inspection of EnergySolutions (ES) Spent Fuel Division (SFD) in March of 2007, the division transitioned from their own QAP approval (docket 71-0804) to the ES corporate QAP approval, docket 71-0935. The team noted that the transition included a review and as-needed update of the associated procedures to support quality activities at the division level. The team also noted that ES procedure ET-SF-QP-001, "List of ES Corporate and SFD-specific QPs for SFD Quality-Affecting Projects," Revision 3, differentiates which procedures are to be maintained at the division level and at the corporate level.

Since ES has requested a license extension for the VSC-24 Certificate of Compliance, the team reviewed and discussed some the efforts for the extension that ES has undertaken in support of the extension request of 40 years.

### 1. MANAGEMENT CONTROLS

#### Quality Assurance Policy

The team reviewed EnergySolutions (ES) document ET-SF-QP-001, "List of ES Corporate and SFD-Specific QPs for SFD Quality Affecting Projects," Revision 3, dated 12/04/2013. This quality procedure (QP) provides a list of ES Corporate and Spent Fuel Division (SFD)-specific QPs used for work conducted by SFD and is applicable to 10 CFR Part 71 and 72 activities. No concerns were identified during the document review.

#### Internal Audits

The team reviewed QPs ES-QA-PR-018, "Quality Assurance Audit," Revision 2, dated 09/17/2012, and ES-QA-PR-008, "Auditor Qualification," Revision 2, dated 08/31/2012. The team reviewed the last full audit performed of SFD at the Campbell, CA, office location conducted June 2011 and documented in Audit GCQA-11-005. The team determined that the audit was thorough, was conducted in accordance with the requirements of ES-QA-PR-018, and that the lead auditor was independent of activities performed at SFD. The team also reviewed the qualification records of several lead auditors and noted that they all were in conformance with the requirements of ES-QA-PR-008. No concerns were identified with the audit report and lead auditor qualifications.

The team reviewed the ES schedule for all audits to be conducted in 2013 company wide as well as the audit schedules for 2011 and 2012. In reviewing the schedules and after discussion with ES/SFD personnel the team determined that the SFD location has not been audited within two years of its previous audit in June 2011 as required by ES-QA-PR-018. The team was informed that this issue had been identified just prior to the inspection and was documented in ES Condition Report (CR) ES-CR13-005 for tracking and resolution.

## Nonconformance Controls

The team reviewed QPs ES-AD-PR-006, "Reporting of Defects and Noncompliances (10CFR21)," ES-AD-PR-008, "Condition Reports," and ET-SF-EP-318, "Engineering Evaluation of Condition Reports." No supplier nonconformance reports were reviewed by the team as none exist since SFD has controlled any recent 10 CFR Part 71 or 72 fabrication activities. All CRs generated over the last three years were reviewed. Resolution of the underlying issues was assessed to be proper and appropriate for the nature of each issue. No concerns were identified with the CR process although the team noted that some CRs had a revision level designated on the cover sheet, yet there were no instructions in ES-AD-PR-008 governing the revision process. This issue was discussed with ES/SFD personnel for their consideration in providing such guidance in the CR QP.

## Document Control and Records Management

The team was provided a demonstration by the ES-SFD personnel on the use and accessibility of the document control and records management systems in use. The demonstration included discussion on how dual storage is in use through both electronic and hard copy controls and how each is controlled. The system was demonstrated from multiple locations and performed adequately.

During the review of ES-AD-PR-001, "Document Preparation," Revision 3, and from the review of the VSC-04 Project Plan for "VSC-24 CoC Renewal Project, the team noted that the project plan had not received the biennial review required by the document preparation procedure (Step 4.7.1). ES initiated condition report PT-CR13-065 to address the missed review and to capture that an earlier condition report (ENG-CR11-004) had failed to provide adequate effectiveness. The team also noted from the review of the VSC-04 Project Plan that step 8.1.1 requires project specific training (by name) on the plan, specifically a past ES QA Manager. The responsibilities of the QA Manager position had been transferred to a new person and no evaluation had been performed to determine if the training was still required or not. ES issued CR PT-CR13-064 to capture the issue for tracking and resolution. Finally, the team noted that section 8.1 of the VSC-04 Project Plan provides a list of QA procedures that are applicable to the plan. Recent changes occurring from a biennial procedure review has caused the list to be inaccurate. ES issued CR PT-CR13-063 to capture the issue for tracking and resolution. No other concerns were noted by the team.

## 2. DESIGN CONTROLS

### Design Development and Modifications

While no design changes or modifications had occurred since the last NRC inspection, the team utilized the inspection process to revisit ES' design procedures and processes, as well as modification processes currently in place. The team did note that ES has been evaluating both stress and fatigue in association to longer use of storage casks as license extensions are intended and granted. The team noted from reviews that ES has a mature quality program which includes design and procurement procedural guidance. Some of the ES procedures reviewed during this inspection included the following:

- ES-AD-PR-001, Document Preparation, Revision 3
- ES-AD-PR-002, Document Control, Revision 2
- ES-PU-PR-004, Purchase Requisition, Revision 7



ES-QA-PR-003, Supplier Evaluation, Revision 3  
ES-QA-PR-004, Procurement Document Review, Revision 1  
ES-QA-PR-005, Records, Revision 2  
ES-QA-PR-010, Dedication of Commercial Grade Items/Services, Revision 4  
ES-QA-PR-011, Upgrade of Commercial Items and Services, Revision 1  
ES-QA-PR-022, Supplier Nonconformance Reports Procedure, Revision 0

The team reviewed ES-SF-EP-300, Revision 1 "Design Control" and ES-SF-EP-302, Revision 1, "Calculations," as well as the following calculations:

VSC-04.3203, Revision 1, "MSB Assembly Fatigue Analysis"  
VSC-04.3205, Revision 0, "Palisade MSB#4 Crack Growth Analysis Inputs"

The team noted that both calculations were performed in support of stress inputs and fatigue failures in regard to 60 year usage.

#### Procurement

The team reviewed procedures ES-QA-PR-003, Revision 3, "Supplier Evaluation," ES-PU-PR-004, "Purchase requisitions," and ES-QA-PR-009, "Quality Levels," (Q-List), Revision 3, and noted that ES identifies their quality levels with numerals (1, 2, & 3) corresponding to NUREG 6407 categories of A, B, & C. Also noted and reviewed by the team was ES-SFD's procedure ET-SF-EP-307, "Quality Levels," Revision 0, which provides guidance on quality determinations. The team specifically verified the approval of Structural Integrity Associates, Inc. on the ES approved supplier's listing since this company had provided services for ES through purchase order 626014, Revision 1, for development of the "Flaw Tolerance Evaluation of Multi-Stage Basket CMSB-04" which is in use for the VSC-24 storage cask.