

December 8, 2009

Mr. Robert Paton, V.P.  
Quality Assurance  
Energy Steel & Supply Company  
3123 John Conley Drive  
Lapeer, MI 48446-2987

SUBJECT: NRC INSPECTION REPORT NO. 99901098/2009-201 AND NOTICE OF  
NONCONFORMANCE TO ENERGY STEEL AND SUPPLY COMPANY

Dear Mr. Paton:

On October 20-22, 2009, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a follow-up inspection at the Energy Steel and Supply Company (ESSC) facility in Lapeer, Michigan. The purpose of the inspection was to review the implementation of corrective action activities described in your March 3, 2009 response letter to the NRC's Inspection Report 9991098/2008-201, Notice of Violation (NOV), and Notices of Nonconformance (NON) issued November 18, 2008.

Based on the results of this inspection, the NRC inspectors determined that the corrective actions taken by ESSC in response to the findings contained in NRC Inspection Report 99901098/2008-201 were effectively implemented, with the exception of Nonconformance 99901098/2008-201-06. Specifically, the NRC inspectors determined that ESSC failed to implement adequate corrective actions to address issues identified in Nonconformance 99901098/2008-201-06 for ESSC's failure to process corrective actions in a timely manner or document the justification for extending the completion dates. This nonconformance to the requirements of Appendix B to 10 CFR Part 50 is cited in the enclosed NON, and the circumstances surrounding it is described in detail in the subject inspection report. Please provide a written explanation or statement within 30 days of this letter in accordance with the instructions specified in the enclosed NON.

In accordance with 10 CFR 2.390, "Public Exemptions, Requests for Withholding," the agency will make a copy of this letter, its enclosures, and your response available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information

required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

Sincerely,

**/RA/**

Richard A. Rasmussen, Chief  
Quality and Vendor Branch 2  
Division of Construction Inspection  
& Operational Programs  
Office of New Reactors

Docket No: 999-01098

Enclosures: 1. Notice of Nonconformance  
2. Inspection Report No. 99901098/2009-201

required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

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## NOTICE OF NONCONFORMANCE

Energy Steel & Supply Company  
3123 John Conley Drive  
Lapeer, MI 48446-2987

Docket No: 999-01098  
Inspection Report Number: 2009-201

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted October 20-22, 2009, at Energy Steel & Supply Company (ESSC), the NRC staff found that certain activities were not conducted in accordance with NRC requirements that were contractually imposed upon ESSC by NRC licensees.

1. Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50 states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Section 16.0 of the Nuclear Quality Assurance Manual (NQAM) stated that the purpose of the corrective action program is to assure that conditions adverse to quality are promptly identified and followed through to correction and completion with sufficient action to preclude repetition.

ESSC SOP Q-16.1, "Nonconformance and Corrective Action Reporting Procedure", Revision 2, Paragraph 5.2.2, stated that corrective action reports that are found to be open for more than 30 business days of issuance shall require immediate additional actions to address prompt corrective actions.

Contrary to the above, as of October 22, 2009, ESSC failed to implement the appropriate measures to process corrective actions in a timely manner. Specifically, ESSC had 24 corrective action reports that exceeded the due date with adequate justification to extend the completion date as allowed by ESSC program.

These issues have been identified as Nonconformance 99901098/2009-201-01.

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Chief, Richard A. Rasmussen, Chief, Quality and Vendor Branch 2, Division of Construction Inspection and Operational Programs, Office of New Reactors, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each noncompliance: (1) the reason for the noncompliance, or if contested, the basis for disputing the noncompliance; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid noncompliances; and (4) the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your

ENCLOSURE 1

response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection, described in 10 CFR 73.21.

Dated at Rockville, Maryland, this 8<sup>th</sup> day of December 2009.

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NEW REACTORS  
DIVISION OF CONSTRUCTION INSPECTION AND OPERATIONAL PROGRAMS  
VENDOR INSPECTION REPORT

Docket No.: 999-01098

Report No.: 99901098/2009-201

Vendor: Energy Steel & Supply Company  
3123 John Conley Drive  
Lapeer, MI 48446-2987

Vendor Contacts: Mr. Robert Paton  
VP Quality Assurance  
810-538-4965  
[rpaton@enersteel.com](mailto:rpaton@enersteel.com)

Nuclear Industry / Activity: Energy Steel and Supply Company (ESSC) is a long standing nuclear supplier of safety related products and services including ASME code materials to both the domestic commercial nuclear power industry and abroad. They maintain multiple active ASME certification stamps. Their core product lines in support of nuclear power plants have been in steel and pipe, but they have expanded their supply scope by partnering with various original equipment manufactures (OEM) to manufacture replacement safety related parts, components and services.

Inspection Dates: October 20-22, 2009

Inspectors: Aida Rivera-Varona NRO/DCIP/CQV2, Team Leader  
Carla Roquecruz, NRR/ADES/DE/EQVB, Inspector  
Jonathan Ortega NRO/DCIP/CQV2, Inspector In-Training

Approved by: Richard A. Rasmussen, Chief  
Quality and Vendor Branch B  
Division of Construction Inspection  
& Operational Programs  
Office of New Reactors

## EXECUTIVE SUMMARY

Energy Steel & Supply Company  
99901098/2009-201

The purpose of the inspection was to review the Energy Steel & Supply Company's (ESSC) corrective action activities described in your March 3, 2009 response letter to the NRC's Notice of Violation (NOV) and Notices of Nonconformance (NON) issued November 18, 2008. The inspection was conducted at ESSC's facility in Lapeer, Michigan.

The NRC inspection bases were the following:

- Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50, "Domestic Licensing of Production and Utilization Facilities," of Title 10 of the *Code of Federal Regulations* (10 CFR)
- 10 CFR Part 21, "Reporting of Defects and Noncompliance"

The NRC staff implemented Inspection Procedure 43002, "Routine Inspections of Nuclear Vendors" and Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Nonconformance," during the conduct of this inspection.

During the inspection, daily meetings were conducted between the NRC inspectors and ESSC staff to discuss ongoing inspection activities and observations and/or potential findings.

The previous NRC inspection conducted at ESSC's facility in Lapeer, Michigan, occurred in July 2008. During that inspection, the NRC inspectors identified one violation and eight nonconformances. A summary of each is included below:

- Violation 99901098/2008-201-01 was issued because ESSC failed to adopt an appropriate procedure for the evaluation and reporting of defects and failures to comply under 10 CFR Part 21.
- Nonconformance 99901098/2008-201-02 was issued because ESSC's design control program failed to document the review of customer purchase orders and its changes or revisions on contract review forms. In addition, ESSC failed to document in the engineering change notice (ECN), the engineering and QA evaluation for the need of a job traveler revision based on the scope of the design change. ESSC also failed to document the engineering evaluation of the effect of the ECN on work-in-process, work that was partially completed, or any completed work.
- Nonconformance 99901098/2008-201-03 was issued because ESSC's procedures governing commercial-grade dedication, failed to: 1) provide guidance to identify and dedicate items other than raw materials; and 2) verify that the supplier's quality program included processes, such as material traceability and lot/batch controls, for the control of critical characteristics to support sampling in commercial grade dedication.

- Nonconformance 99901098/2008-201-04 was issued because of ESSC's failure to effectively implement a receipt inspection to verify an item's compliance to specified requirements.
- Nonconformance 99901098/2008-201-05 was issued because of ESSC's failure to establish procedure instructions that would include guidance for the performance of a final inspection before an item is shipped to customer.
- Nonconformance 99901098/2008-201-06 was issued because four ESSC corrective action reports (CPAs), specifically, CPA-1031, CPA-1028, CPA-1027, and CPA-1024, exceeded the 30 business day time frame and did not include a documented justification of the extension of the completion dates.
- Nonconformance 99901098/2008-201-07 was issued because of ESSC's failure to develop and implement an adequate document control process consistent with the regulatory requirements.
- Nonconformance 99901098/2008-201-08 was issued because of ESSC's failure to provide adequate documentation to demonstrate that its testing personnel are fully qualified.

During the October 2009, inspection, the NRC inspectors concluded that the corrective actions taken by ESSC in response to the NOV and NONs contained in NRC Inspection Report 99901098/2008-201, were effectively implemented and were in compliance with the applicable requirements of 10 CFR Part 21 and Appendix B to 10 CFR Part 50, with the exception of the areas described below:

The NRC inspectors identified Nonconformance 99901098/2009-201-01 in response to ESSC's failure to implement adequate corrective actions to address issues identified in Nonconformance 99901098/2008-201-06. Specifically, ESSC's failed to process corrective actions in a timely manner. This issue is further discussed in Section 6 of this report.



## REPORT DETAILS

### 1. VIOLATION 99901098/2008-201-01

#### a. Inspection Scope

The NRC inspectors reviewed Energy Steel & Supply Company's (ESSC) corrective action records, quality assurance program, implementing procedures, training records, and additional documents, as applicable, associated with the corrective actions ESSC had implemented in response to Violation 99901098/2008-201-01 to verify compliance with the requirements of 10 CFR Part 21.

Within the scope of this area of the inspection, the NRC inspectors reviewed the following procedures, records, and other documents:

- ESSC Standard operating Procedure (SOP) Q15.1, "Reporting of Defects Procedure (10 CFR Part 21 Evaluation and Reporting)," Revision 5, dated January 7, 2009
- ESSC Corrective Action Report (CPA) Number 1037, dated July 25, 2008.

#### b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Violation 99901098/2008-201-01 as a result of ESSC's failure to provide sufficient detail in SOP Q15.1 to perform an evaluation to determine if a deviation could create a substantial safety hazard if it were to remain uncorrected. ESSC initiated CPA - 1037 to address Violation 99901098/2008-201-01 and identify actions taken to prevent recurrence. As result, SOP Q15.1 was revised to include additional guidance to perform the evaluation.

The NRC inspectors noted that the procedure was revised to adequately provide guidance for all employees who identified a potential situation or item that was reportable under 10 CFR Part 21 to report the defect and all applicable facts to the President or Vice President (VP), Quality Assurance (QA). Additionally, the NRC inspectors noted that the new revision of the procedure included guidance on how to perform the evaluation of a deviation.

The NRC inspectors asked for copies of all 10 CFR Part 21 evaluations performed during the last year. The VP, QA manager stated that no 10 CFR Part 21 evaluations had been performed in the last year. The NRC inspectors sampled a group of CPAs and nonconformance reports (NCs) to assess Part 21 applicability. The NRC inspectors did not identify any issues in this area.

#### c. Conclusions

The NRC inspectors concluded that ESSC adequately implemented the corrective actions specified in their letter to the NRC dated March 3, 2009, and CPA - 1037. Therefore, Violation 99901098/2008-201-01 is closed.

### 2. NONCONFORMANCE 99901098/2008-201-02

#### a. Inspection Scope

The inspectors reviewed ESSC's corrective and preventive actions associated with Nonconformance 99901098/2008-201-02. Specifically, the NRC inspectors reviewed ESSC's order entry and design control program to verify compliance with the QA requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50.

Within the scope of this area of the inspection, the NRC inspectors reviewed the following procedures, records, and other documents:

- ESSC SOP Q5.3, "Development & Control of Energy Steel Forms," Revision 0, dated September 08, 2008
- Indoctrination & Training Record, Subject: Training – Contract Review Form, dated July 22, 2008
- Indoctrination & Training Record, Subject: Training – Design Report Review, dated October 13, 2008
- Indoctrination & Training Record, Subject: Training – Design Report Review, dated October 15, 2008
- ESSC F361, "Design Report Review Form," Revision 0, dated February 5, 2009
- ESSC Contract Review Report for Job No. 34410 dated June 29, 2009
- ESSC Contract Review Report for Job No. 35360 dated May 15, 2009
- ESSC Design report review for design report No. MPR 3215, Revision 1, dated November 25, 2008
- ESSC Design report review for design report No. MPR 3273, Revision 1, dated October 16, 2009

b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-02 for ESSC's failure to document in an Engineering Change Notice (ECN) the Engineering and QA evaluation for the need of a job traveler revision based on the scope of the design change. Nonconformance 99901098/2008-201-02 also identified ESSC's failure to document the engineering evaluation on the effect of the ECN on work-in-process, work that is partially completed (sub-assemblies), or any completed work.

ESSC initiated CPA - 1044 to address Nonconformance 99901098/2008-201-02 and identify actions taken to prevent recurrence. CPA - 1044 stated that ESSC found two reasons for the noncompliance: 1) lack of re-enforced specific direction and training on the method of documenting the review for customer purchase order revisions on the contract review form (F-272) and 2) human error for failure to check the ENC form blocks for yes/no effect.

In CPA - 1044, the corrective action to address the nonconformance and to preclude recurrence was to perform training to re-enforce requirements for documenting reviews of customer purchase orders and code design report revisions and the need to fully complete ECN forms.

ESSC provided formal training for QA and Engineering personnel regarding contract and design report change reviews. The NRC inspectors reviewed the training records dated July 22, 2008, October 13, 2008, and October 15, 2008. During the training sessions a Design Report checklist was developed and was used as a pilot during the training session on October 15, 2008. The Design Report Review Form (F361) was formally issued on February 5, 2009.

The inspectors sampled four reports, two for contract review and two for design review to verify that the training was effective and that the new F-361 form for the design report review was completed. The NRC inspector reviewed the reports for completeness by verifying that the necessary forms and supporting documents were included in the reports.

c. Conclusions

The NRC inspectors concluded that ESSC adequately implemented the corrective actions specified in their letter to the NRC dated March 3, 2009, and CPA - 1044. Therefore, Nonconformance 99901098/2008-201-02 is closed.

3. NONCONFORMANCE 99901098/2008-201-03

a. Inspection Scope

The NRC inspectors reviewed ESSC's corrective and preventive actions associated with Nonconformance 99901098/2008-201-03. Specifically, the NRC inspectors reviewed ESSC's procurement and acceptance processes of commercial-grade items (CGIs) for use as basic components to verify compliance with 10 CFR Part 21.

Within the scope of this area of the inspection, the NRC inspectors reviewed the following procedures, records, and other documents:

- SOP Q7.2, "Commercial Grade Dedication," Revision 8, dated October 19, 2009
- Form F-190, "Commercial Grade Item Dedication Plan," Revision 3, dated October 19, 2009
- CPA - 1038, dated July 25, 2008
- ESSC Commercial Grade Item Survey Report No. 2372-0801 to Waukesha Bearings, dated October 9, 2008
- ESSC Dedication Plan for ESSC Job No. 34387 for "Eccentric Shaft Bearing – Bronze and Babbitt," dated December 29, 2008
- ESSC Dimensional Inspection Record for ESSC Job No. 34387 dated May 14, 2009
- Material Testing and Non-Destructive Testing Report No. ENE007-09-04-79716-1 from Stork Material Technologies for one babbitt sample of ESSC Job No. 34387, dated April 10, 2009

- Material Testing and Non-Destructive Testing Report No. ENE007-09-04-79716-2 from Stork Material Technologies for one bronze sample of ESSC Job No. 34387, dated April 10, 2009
- ESSC Commercial Grade Item/Service Checklist for the Audit No. 0340-0901 of the Rexnord Auburn Plant (Formerly The Falk Corporation), dated September 30, 2009.

b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-03 as a result of ESSC's failure to provide sufficient details to adequately identify critical characteristics and perform commercial grade dedication activities in SOP Q7.2. Additionally, Nonconformance 99901098/2008-201-03 identified ESSC's failure to include verification of critical characteristics, such as material traceability and lot/batch control, during the survey performed at Falk Corporation to support a sampling practice during the commercial grade dedication. ESSC issued CPA - 1038 to address this finding and prevent recurrence.

b.1 Commercial Grade Dedication Procedure

The NRC inspectors noted that SOP Q7.2 was recently revised to establish detailed guidance to provide reasonable assurance that a CGI or service would perform its safety function. SOP Q7.2 was updated to provide the details and instructions describing the methods to dedicate CGIs. The NRC inspectors noted that SOP Q7.2 provided adequate controls for dedication activities, including CGI evaluation criteria, procurement controls, acceptance/rejection criteria consistent with safety function, material traceability controls, and controls for receipt inspection and test activities.

The NRC inspectors performed a sample review of dedication plans to verify adequate implementation of the dedication process. However, since SOP Q7.2 was recently issued, the NRC inspectors were only able review one dedication plan that was being developed for a coupling. The NRC inspectors noted that the dedication plan adequately included the evaluation criteria and acceptance criteria consistent with the safety function, including the parts drawing that showed the required dimensions for the parts to be verified during acceptance.

b.2 Commercial Grade Survey

During the June 2008, inspection, the NRC inspectors issued NON99901098/2008-201-03 which identified that ESSC's commercial grade survey process failed to verify that the supplier's quality program included processes, such as material traceability and lot/batch controls, for the control of critical characteristics to support a sampling practice during the commercial grade dedication.

The NRC inspectors reviewed a commercial grade survey performed by ESSC to verify that their surveys identified critical characteristics and included adequate verification that the suppliers' quality programs included processes, such as material traceability and lot/batch controls, for the control of the identified critical characteristics. Specifically, the NRC inspectors reviewed the commercial grade surveys performed by ESSC for Waukesha Bearings and Rexnord Auburn Plant (Formerly The Falk Corporation). During the review of these commercial grade surveys, the NRC inspectors noted that ESSC's commercial grade surveys adequately identified the critical characteristics. Additionally, the NRC inspectors noted that ESSC

adequately verified that these suppliers' quality programs included processes, such as material traceability and lot/batch controls for the control of critical characteristics.

c. Conclusions

The NRC inspectors concluded that ESSC adequately implemented the corrective actions specified in their letter to the NRC dated March 3, 2009, and CPA - 1038. Therefore, Nonconformance 99901098/2008-201-03 is closed.

4. NONCONFORMANCE 99901098/2008-201-04

a. Inspection Scope

The NRC inspectors reviewed ESSC's corrective action records, implementing procedure, and additional documents associated with the corrective actions taken by ESSC in response to Nonconformance 99901098/2008-201-04. Additionally, the inspectors observed ESSC personnel performing a receipt inspection.

Within the scope of this area of the inspection, the NRC inspectors reviewed the following procedures, records, and other documents:

- ESSC SOP Q7.1, "Receipt Inspection Procedure," Revision 4, dated October 19, 2009
- ESSC CPA No. 1042, dated July 25, 2008
- ESSC Form F-109, "Energy Steel Receiving Tag," Revision 6, dated June 7, 2004
- ESSC Form F-150, "Energy Steel Hold Tag," Revision 1, dated March 15, 1988
- ESSC Nonconformance Report (NC) No. 1447, dated July 23, 2008
- ESSC NC No. 1407, dated May 7, 2008

b. Observations and Findings

Nonconformance 99901098/2008-201-04 was cited for ESSC's failure to effectively implement a receipt inspection program for examinations and measurements that should be used to verify an item's compliance to specified requirements. For example, during receipt inspection, (1) ESSC failed to identify that a wrong item was received, and after acceptance ESSC shipped the item to its customer, and (2) failed to identify that equipment calibrated by an ESSC subcontractor was not properly labeled to show the correct calibration dates.

The NRC inspectors verified that ESSC had implemented the corrective actions described in CPA - 1042. Specifically, ESSC's revision of SOP Q7.1 to provide instructions regarding: 1) receipt inspection of complex assemblies and 2) receipt inspection of calibrated equipment received from calibration laboratories. The inspectors reviewed SOP Q7.1 and noted that steps were added to the procedure to adequately identify and verify an item's compliance with specified requirements. Additionally, Section 6.3 of SOP Q7.1 described the steps to examine gages received from calibration services to verify conformance to purchase order requirements; including calibration status label correctness and gage identification (Asset or S/N).

In ESSC's response letter to the NRC dated March 5, 2009, ESSC identified corrective steps to avoid noncompliance. The NRC inspectors verified that the wrong item received by ESSC and shipped to the customer was returned to the vendor and replaced as indicated in NC - 1407. The NRC inspectors also reviewed NC - 1447 that was issued to address the inadequate labeling of calibrated equipment by an ESSC subcontractor. NC - 1447 was closed once the calibration records were corrected.

On October 21, 2009, the NRC inspectors observed an ESSC inspector performing a receipt inspection of 63 flat washers using SOP Q7.1, Revision 4. The inspectors determined that additions made to the receipt inspection procedure were adequately implemented during the receipt inspection, and that the material received matched the requirements of the purchase order.

c. Conclusions

The inspectors reviewed the corrective actions associated with Nonconformance 99901098/2008-201-04, as described in ESSC CPA - 1042. The inspectors concluded that the corrective actions were completed as stated in the CPA and were effectively implemented. Therefore, Nonconformance 99901098/2008-201-04 is closed.

5. NONCONFORMANCE 99901098/2008-201-05

a. Inspection Scope

The NRC inspectors reviewed ESSC's corrective action records, quality assurance manual, implementing procedures and additional documents associated with the corrective actions taken by ESSC in response to Nonconformance 99901098/2008-201-05. Additionally, the inspectors observed ESSC personnel performing a final inspection. The NRC inspectors reviewed the following documents:

- ESSC SOP Q10.3, "Final Inspection Procedure" Revision 0, dated October 19, 2009
- ESSC CPA No. 1041, dated July 25, 2008
- ESSC Form F-362, "Energy Steel Final Inspection Checklist," Revision 0, dated October 19, 2009

b. Observations and Findings

During the July 2008 inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-05 for ESSC's failure to establish a procedure that included guidance for the performance of the final inspection prior to an item being shipped to its customer. In ESSC's response letter to the NRC dated March 5, 2009, the vendor stated that, "ESSC relied on shop travelers for specifics regarding final inspection requirements, however in some cases the shop travelers are very general in this regard, e.g. the traveler step for final inspection was found to simply state "QC Final Inspection" without any details."

ESSC's response to this nonconformance stated that CPA - 1041 was issued providing the vendor's corrective measures. CPA - 1041 stated that SOP Q10.3 has been developed and implementation would take place upon review and approval. The NRC noted that SOP Q10.3

was issued prior to the inspection and was developed to perform final inspections for material, parts or items that have been completed and are ready for final shipment to the customer. The NRC inspectors reviewed SOP Q10.3 and noted that it included measures for the verification of: identity (material, marking, labeling); quantity; damage and cleanliness; documentation to accompany shipment is applicable to item; shipping address correctness; and packaging.

The NRC inspectors observed ESSC personnel performing a final inspection using this procedure to verify that ESSC had implemented the corrective actions described in CPA - 1041. The inspectors noted that the final inspection was performed following SOP Q10.3 and results were adequately documented in form F-362, "Energy Steel Final Inspection Checklist."

c. Conclusions

The inspectors reviewed the corrective actions associated with Nonconformance 99901098/2008-201-05, as described in ESSC CPA - 1041. The inspectors concluded that the corrective actions were completed as stated in the CPA and were effectively implemented. Therefore, Nonconformance 99901098/2008-201-05 is closed.

6. NONCONFORMANCE 99901098/2008-201-06

a. Inspection Scope

The inspectors reviewed ESSC's corrective and preventive actions associated with Nonconformance 99901098/2008-201-06, which was identified during the July 2008, NRC inspection.

Within the scope of this area of the inspection, the NRC inspectors reviewed the following procedures, records, and other documents:

- ESSC SOP Q15.0, "Nonconformance Reporting Procedure," Revision 0, dated April 18, 2008
- ESSC SOP Q16.1, "Nonconformance & Corrective Action Reporting Procedure," Revision 2, dated April 21, 2008
- ESSC CPA No. 1043, dated July 28, 2008
- ESSC CPA No. 1095, dated October 21, 2009
- ESSC NC No. 1657, Channel Head dated May 21, 2009
- ESSC NC No. 1570, Channel Head dated February 23, 2009
- ESSC NC No. 1750, 30 inched Outlet pipe on U34575-3 dated September 22, 2009
- ESSC NC No. 1615, 90 degree Elbow 3, dated April 6, 2009

b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-06 for ESSC's failure to provide documentation to justify the extension of

the completion dates for CPA-1031, CPA-1028, CPA-1027, and CPA-1024 – that exceeded the 30 business day time frame.

ESSC initiated CPA - 1043 to address Nonconformance 99901098/2008-201-06 and identified actions taken to prevent recurrence. CPA - 1043 documented that ESSC had not been conducting the periodic reviews of nonconformances and corrective actions status on a weekly basis or extending the CPA time, resulting in untimely closure of CPAs.

In ESSC's letter dated March 3, 2009, ESSC identified its corrective action for Nonconformance 99901098/2008-201-06 as conducting weekly meetings with the VP QA and ESSC QA/QC Supervisor to determine that NC/CPAs were being addressed in a timely manner as stated in SOP Q16.1. These meetings were to take place on Tuesdays at 11:00AM starting July 29, 2008. As a result, a review binder would document the weekly reviews, and monthly NC/CPA status and trend reports were to be issued to the President for review. The initial report was to be issued for the month of January 2009.

The NRC inspectors asked for the reports from those meetings in order to verify that adequate actions and measures had been taken to adequately close CPAs in a timely manner. ESSC failed to provide objective evidence to demonstrate that they were performing the weekly meetings or other actions to identify and take proper measures as required by SOP Q16.1 to prevent having CPAs open for more than 30 business days. The inspectors reviewed the list of open CPA's since July 2008 and found that there were 24 CPAs past due. ESSC did not provide objective evidence that documented the reason or possible extension of the completion dates to complete and close the CPAs.

ESSC's failure to implement adequate corrective actions to address issues identified in Nonconformance 99901098/2008-201-06 for ESSC's failure to process corrective actions in a timely manner or document the justification for extending the completion dates, as required by Criterion XVI of 10 CFR Part 50, Appendix B, has been identified as Nonconformance 99901098/2009-201-01.

c. Conclusions

The NRC reviewed the implementation of the corrective actions specified in their letter to the NRC dated March 3, 2009, and CPA - 1043 and concluded that the actions taken by ESSC failed to address the issue identified in Nonconformance 99901098/2008-201-06. Therefore, Nonconformance 99901098/2008-201-06 is closed and reissued as Nonconformance 99901098/2009-201-01.

7. NONCONFORMANCE 99901098/2008-201-07

a. Inspection Scope

The NRC inspectors reviewed ESSC's corrective action records, quality assurance manual, implementing procedures and additional documents associated with the corrective actions taken by ESSC in response to Nonconformance 99901098/2008-201-07. The NRC inspectors reviewed the following documents:

- ESSC SOP Q5.3, "Development and Control of Energy Steel Forms," Revision 0, dated September 10, 2008



- ESSC SOP Q5.4, "Development and Control of Energy Steel Written Procedures," Revision 0, dated December 29, 2008
- ESSC CPA No. 1040, dated July 25, 2008

b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-07 as a result of the failure to develop a descriptive guideline for the content and structure of procedures and for the issuance and control of forms. ESSC CPA - 1040 documented the inspection finding NON99901098/2008-201-07 and actions to prevent recurrence. As a result, SOP Q5.3 and SOP Q5.4 were issued to establish the guidance needed for the development and control of procedures and forms. In addition, the Document Control position was created to take the responsibility for the control and distribution of ESSC forms and procedures.

The NRC inspectors reviewed SOP Q5.3 which established the measures to assure that developed forms were generated and controlled consistently. SOP Q5.3 outlined the process for the creation, distribution, and control of ESSC forms. For new or revised forms, SOP Q5.3 provided responsibility to Document Control for the distribution of the forms, to incorporate the forms into the forms book, save an electronic copy on the server's Company folder, and update the form log F100. For obsolete forms, Document Control stamped and marked the form as obsolete, transferred the forms to the uncontrolled forms book and transferred the electronically copy to the obsolete folder. The electronic copy was watermarked with obsolete and noted in the obsolete forms log F100OB.

The NRC inspectors also review SOP Q5.4 which provided the guidance to ensure that procedures were developed and controlled consistently. The procedure provided the ESSC procedure template F175 that provided the guidance for preparing the procedure, including the format and numbering. The procedure also provided for the review and approval process.

The NRC inspectors met with the ESSC Document Control staff member and were able to verify that the forms, including the logs, electronic folder, and forms book, had been maintained as required by SOP Q5.3. The NRC inspectors verified that the form F169, Revision 9, which was issued during the date of this inspection, was incorporated into the forms book, the electronic folder, and the adequately entered into the form log F100. In addition, the NRC inspectors verified that Revision 8 of form F169 had been incorporated to the obsolete book with a watermark of obsolete. The inspectors did not identify any issues in this area.

c. Conclusions

The NRC inspectors reviewed the corrective actions associated with Nonconformance 99901098/2008-201-07, as described in CPA - 1040. The NRC inspectors concluded that the corrective actions were completed as stated in the CPA and were effective in preventing recurrence of the condition. Therefore, Nonconformance 99901098/2008-201-07 is closed.

## 8. NONCONFORMANCE 99901098/2008-201-08

### a. Inspection Scope

The NRC inspectors reviewed ESSC's corrective action records, quality assurance manual, implementing procedures and additional documents associated with the corrective actions taken by ESSC in response to Nonconformance 99901098/2008-201-08. The NRC inspectors reviewed the following documents:

- ESSC SOP Q11.1, "Hydrostatic Testing Procedure" Revision 3, dated August 7, 2009
- ESSC CPA No. 1039, dated December 29, 2008
- ESSC Form F-154, "Energy Steel Hydrostatic Test Data Sheet," Revision 1, dated April 3, 2009.
- Job Traveler 35148-A for 16 in. Pipe, dated July 6, 2009.

### b. Observations and Findings

During the July 2008, inspection, the NRC inspectors identified Nonconformance 99901098/2008-201-08 for ESSC's failure to qualify and document qualifications of testing personnel. Prior to the NRC inspection, ESSC did not consider the Hydro Test Technician as test personnel. In ESSC's response letter to the NRC dated March 5, 2009 the vendor stated that, "ESSC understands the NRC point in the importance of the Test Technician and agrees that the training and recorded qualification of this person should be documented." As a result ESSC initiated CPA - 1039 and identified the following corrective steps to avoid recurrence:

1. ESSC to document training and qualification for Hydro Test Technicians.
2. Only trained and documented qualified Test Technicians will be utilized for hydrostatic testing.

On April 16, 2009, the NRC sent a follow-up letter to ESSC requesting clarification for ESSC's reply to nonconformance 99901098/2008-201-08. The NRC staff requested that ESSC clarify its practices for qualification of testing personnel and how ESSC maintained independence between the operator performing the test and the QA/QC personnel observing and documenting the test results. However, ESSC had not responded to this follow-up letter prior to the inspection.

The NRC inspectors reviewed the training record dated September 25, 2008, for the training given on the subject of "Hydro Testing." The training included: hydrostatic testing requirements, set-up, operation, inspection and safety. In addition, ESSC revised SOP Q11.1 on August 7, 2009 and the inspectors noted that Section 4, "Responsibility", line 4.1 stated that, "The Vice President, Quality Assurance and the Welding Engineer are responsible for assuring that personnel performing the hydrostatic test and interpreting results are properly trained and qualified."

The NRC inspectors discussed the training process and the hydrostatic testing process with the QA manager and reviewed job traveler 35148-A, which required a Hydro Test of a 16 inch pipe.

During this inspection, the NRC inspectors discussed with the QA manager the independence between the operator performing the test and the QC inspector since ESSC did not respond to NRC letter dated April 16, 2009. The QA manager indicated that the set-up and performance of the test will be done by the shop fitters qualified to set-up and operate the equipment, with instruction from SOP Q11.1 and the job traveler. The QA/QC inspector will observe the test and document and evaluate the test result. The NRC inspectors concluded that ESSC's procedure and process to perform Hydrostatic Testing is adequate and independence is maintained between the operator performing the test and the QA/QC personnel observing and documenting the test results.

c. Conclusions

The inspectors reviewed the corrective actions associated with Nonconformance 99901098/2008-201-08, as described in ESSC CPA - 1039. The inspectors concluded that the corrective actions were completed as stated in the CPA and were effective in preventing recurrence of the condition. Therefore, Nonconformance 99901098/2008-201-08 is closed.

9. ENTRANCE AND EXIT MEETINGS

On October 20, 2009, the NRC inspectors discussed the scope of the inspection with Lisa Rice, ESSC President; Robert Paton, Vice President Quality Assurance; and ESSC personnel. On October 22, 2009, the NRC inspectors presented the inspection results and observations during an exit meeting with Lisa Rice, Robert Paton, and ESSC personnel. A list of entrance/exit meeting attendees is included as an attachment to this report.

## ATTACHMENT

### 1. ENTRANCE/EXIT MEETING ATTENDEES AND KEY PERSONS CONTACTED

<u>NAME</u>		<u>TITLE</u>	<u>ENTRANCE</u>	<u>EXIT</u>	<u>INTERVIEWED</u>
Lisa Rice	ESSC	President	√	√	
Robert Paton	ESSC	Vice president Quality Assurance	√	√	√
Wendy Kirt	ESSC	Quality Assurance/Quality Control Supervisor	√	√	√
Waylon Waters	ESSC	Sales Manager	√	√	
Tim Shepard	ESSC	Manufacturing Manager	√	√	√
Aida Rivera-Varona	USNRC	Lead Inspector	√	√	
Carla Roquecruz	USNRC	Inspector	√	√	
Jonathan Ortega-Luciano	USNRC	Inspector	√	√	

### 2. INSPECTION PROCEDURES USED

Inspection Procedure 43002, "Routine Inspections of Nuclear Vendors."

Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Nonconformance."

### 3. LIST OF ITEMS OPEN, CLOSED AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99901098/2008-201-01	Closed	NOV	Violation of 10 CFR Part 21
99901098/2008-201-02	Closed	NON	Criterion III
99901098/2008-201-03	Closed	NON	Criterion III
99901098/2008-201-04	Closed	NON	Criterion VII
99901098/2008-201-05	Closed	NON	Criterion X
99901098/2008-201-06	Closed*	NOV	Criterion XVI
99901098/2008-201-07	Closed	NON	Criterion VI
99901098/2008-201-08	Closed	NON	Criterion II
99901098/2009-201-01	Opened	NON	Criterion XVI

\* Nonconformance has been closed but a related finding has been opened due to failure to implement adequate corrective actions to resolve all issues identified in the initial finding.