



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 3, 2022

Mr. Bruce Nagel
Quality Assurance Director
Energy Steel & Supply Company
1785 Northfield Drive
Rochester Hills, MI 48309

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT OF ENERGY STEEL & SUPPLY COMPANY NO. 99902104/2022-201, AND NOTICE OF NONCONFORMANCE

Dear Mr. Nagel:

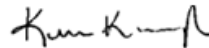
From September 26 through September 30, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Energy Steel & Supply Company's facility (hereafter referred to as ESSC) in Rochester Hills, MI. The purpose of the limited scope inspection was to assess ESSC's compliance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

This technically focused inspection specifically evaluated ESSC's implementation of quality activities associated with the design, fabrication, and testing of safety-related components (e.g., pumps, valves, heat exchangers, piping subassemblies, etc.) being supplied for U.S. nuclear power plants. The enclosed report presents the results of this inspection. This NRC inspection report does not constitute NRC endorsement of your overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC inspection team determined that the implementation of your QA program did not meet certain regulatory requirements imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that ESSC failed to implement adequate corrective actions to address issues identified in Nonconformance 99901098/2009-201-01 for ESSC's failure to process corrective actions in a timely manner or document the justification for extending the completion dates. The NRC inspection team had 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. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter. In response to the enclosed notice of nonconformance (NON), ESSC should document the results of the extent of condition review for this finding and determine if there are any effects on other safety-related components. Please provide a written statement or explanation within 30 days of this letter in accordance with the instructions specified in the enclosed NON. We will consider extending the response time if you show good cause for us to do so.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," the NRC will make available electronically for public inspection a copy of this letter, its enclosure, and your response through the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System, which is accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response (and if applicable), 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, 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 would 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, "Protection of Safeguards Information: Performance Requirements."

Sincerely,



Signed by Kavanagh, Kerri
on 11/03/22

Kerri A. Kavanagh, Chief
Quality Assurance and Vendor Inspection Branch
Division of Reactor Oversight
Office of Nuclear Reactor Regulation

Docket No.: 99902104

EPID No.: I-2022-001-0126

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99902104/2022-201
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT OF ENERGY STEEL & SUPPLY COMPANY NO. 99902104/2022-201, AND NOTICE OF NONCONFORMANCE Dated: November 3, 2022

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NRR-106

OFFICE	NRR/DRO/IQVB	NRR/DRO/IQVB	NRR/DRO/IQVB
NAME	DPark	YDiaz-Castillo	FVega
DATE	10/25/2022	10/26/2022	10/26/2022
OFFICE	NRR/DRO/IQVB	NRR/DRO/IRAB	NRR/DRO/IQVB
NAME	YLaw	BHughes	KKavanagh
DATE	10/26/2022	10/27/2022	11/3/2022

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NOTICE OF NONCONFORMANCE

Energy Steel & Supply Company
1785 Northfield Drive
Rochester Hills, MI 48309

Docket No. 99902104
Report No. 2022-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Energy Steel & Supply Company's (hereafter referred to as ESSC) facility in Rochester Hills, MI, from September 26 through September 30, 2022, ESSC did not conduct certain activities in accordance with NRC requirements that were contractually imposed upon ESSC by its customers or NRC licensees:

- A. Criterion XVI, "Corrective Action," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," 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. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Section 16.0 of ESSC's Nuclear Quality Assurance Manual (NQAM) Issue No. 7, Revision No. 3, dated December 1, 2021, states, in part, that, "Corrective action reports are utilized when significant conditions adverse to quality exist of such magnitude as to require identification of root cause and corrective action to preclude repetition."

Subsection 7.2.2 of ESSC's procedure No. Q15.0, "Nonconformance Reporting Procedure," Revision No. 3, dated May 27, 2021, states, in part, that "The Nonconformance (NC) reports found to be more than 30 business days of issue without schedule or reason require additional management actions to address prompt corrective action."

Subsection 6.2.3 of ESSC's procedure No. Q16.1, "Corrective Action Reporting Procedure," Revision No. 4, dated May 28, 2021, states, in part, that "Corrective Action/Preventative (CPA) reports found to be open for more than the scheduled completion (normally 30 business days of issue) without schedule or reason shall require immediate additional actions to address prompt corrective action."

Contrary to the above, as of September 30, 2022, ESSC failed to promptly identify and correct significant conditions adverse to quality to ensure that the cause of the condition is determined and corrective action taken to preclude repetition. Specifically, ESSC failed to implement corrective actions to address Nonconformance 99901098/2009-201-01 as documented in CPA No. 1098. Both ESSC's official response to Nonconformance 99901098/2009-201-01 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100250242) and CPA No. 1098 stated that ESSC's Quality Assurance (QA) Vice-President or QA/Quality Control Supervisor would conduct periodic reviews to determine the NC and CPA reports would be addressed in a timely manner and monthly status and trend report would continue to be issued to the President for review. During this inspection, the NRC inspection team identified that ESSC is not conducting periodic reviews or issuing the monthly status and trend reports to the

President, and as a result, NC and CPA reports are not being promptly addressed. Because ESSC failed to implement corrective actions to address Nonconformance 99901098/2009-201-01, the NRC inspection team identified 2 NC and 13 CPA reports that were past the 30 business days due date as required in ESSC's nonconformance and corrective action procedures Q15.0 and Q16.1, respectively. In addition, during an internal audit performed in July of 2022, ESSC identified an audit finding related to 2 NC and 4 CPA reports that were past the 30 business days due date. However, ESSC did not initiate a CPA report to address this issue until 2 months after identification.

This issue has been identified as Nonconformance 99902104/2022-201-01.

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, Quality Assurance and Vendor Inspection Branch, Division of Reactor Oversight, Office of Nuclear Reactor Regulation, 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 and the results achieved; (3) the corrective steps that will be to avoid further noncompliance; and (4) the date when the corrective action will be completed. Where good cause is shown, the NRC will consider 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 Agencywide Documents Access and Management System, which is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or Safeguards Information (SGI) so that the NRC can make it 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, 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 would 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, "Protection of Safeguards Information: Performance Requirements."

Dated this 3rd day of November 2022.

**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF REACTOR OVERSIGHT
VENDOR INSPECTION REPORT**

Docket No.: 99902104

Report No.: 99902104/2022-201

Vendor: Energy Steel & Supply Company
1785 Northfield Drive
Rochester Hills, MI 48309

Vendor Contact: Mr. Bruce Nagel
Quality Assurance Director
Email: bnagel@energysteel.com
Office: (810) 538-4954

Nuclear Industry Activity: Energy Steel & Supply Company (hereafter referred to as ESSC) is an American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV) Code N, NA, NPT, NS and NR Certificate Holder. ESSC's scope of supply includes ASME B&PV Code Class 1, 2, and 3 design, fabrication and supply of safety related non-ASME Section III products and services for NRC's regulated facilities.

Inspection Dates: September 26 - 30, 2022

Inspectors:	Dong Park	NRR/DRO/IQVB	Team Leader
	Yamir Diaz-Castillo	NRR/DRO/IQVB	
	Frankie Vega	NRR/DRO/IQVB	Trainee
	Yiu Law	NRR/DRO/IQVB	Remote

Approved by: Kerri A. Kavanagh, Chief
Quality Assurance and Vendor Inspection Branch
Division of Reactor Oversight
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Energy Steel & Supply Company
99902104/2022-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a vendor inspection at the Energy Steel & Supply Company's (hereafter referred to as ESSC) facility in Rochester Hills, MI, to verify that it had implemented an adequate quality assurance (QA) program that complies with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." In addition, the NRC inspection also verified that ESSC implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance." Furthermore, the NRC inspection verified that ESSC had implemented a program in accordance with the applicable requirements of Section III, "Rules for Construction of Nuclear Facility Components," Section V, "Nondestructive Examination," and Section IX, "Welding and Brazing Qualification," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, and the American Society for Nondestructive Testing (ASNT) SNT-TC-1A, "Personnel Qualification and Certification in Nondestructive Testing." This was the first NRC inspection of ESSC's facility in Rochester Hills, MI and the third inspection of ESSC.

This technically focused inspection specifically evaluated ESSC's implementation of quality activities associated with the design, fabrication, and testing of safety-related components (e.g., pumps, valves, heat exchangers, piping subassemblies, etc.) being supplied for U.S. nuclear power plants. Specific activities observed by the NRC inspection team included:

- Walkthrough of the welding filler material storage and control area
- Inspection of the segregated hold area for nonconforming items
- Calibration of a 6-inch caliper

These regulations served as the bases for the NRC inspection:

- Appendix B to 10 CFR Part 50
- 10 CFR Part 21

During the course of this inspection, the NRC inspection team implemented the following inspection procedures (IP): IP 43002, "Routine Inspections of Nuclear Vendors," dated April 5, 2022; IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated April 5, 2022; and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated May 16, 2019.

With the exception of the nonconformance described below, the NRC inspection team concluded that ESSC's QA policies and procedures comply with the applicable requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part 21, and that ESSC's personnel are implementing these policies and procedures effectively. The results of this inspection are summarized below.

Nonconforming Material, Parts, or Components and Corrective Action

The NRC inspection team reviewed ESSC's policies and procedures that govern the implementation of its nonconformance control and corrective action programs to verify compliance with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts or Components," and Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team verified that the procedures contained sufficient guidance for evaluating non-conforming conditions, ensuring that conditions are evaluated for possible corrective action and checking for 10 CFR Part 21 applicability. The NRC inspection team reviewed a sample of non-conformance (NC) and corrective/preventive action (CPA) reports to verify compliance with regulatory requirements and adherence to ESSC's procedures.

The NRC inspection team issued Nonconformance 99902104/2022-201-01 in association with ESSC's failure to implement the regulatory requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Nonconformance 99902104/2022-201-01 cites ESSC for failing to promptly identify and correct significant conditions adverse to quality to ensure that the cause of the condition is determined, and corrective action taken to preclude repetition. Specifically, the NRC inspection team identified that ESSC is not conducting periodic reviews nor issuing monthly status and trend reports to the President as part of the corrective actions initiated to address Nonconformance 99901098/2009-201-01. These corrective actions are documented in ESSC's official response to Nonconformance 99901098/2009-201-01 (Agencywide Documents Access and Management System Accession No. ML100250242). As a result, the NRC inspection team identified 2 NC and 13 CPA reports that were not closed within the 30 business days due date as required in ESSC's nonconformance and corrective action procedures. In addition, ESSC identified that 2 NC and 4 CPA reports were open past the 30 business days due date during an internal audit performed in July 2022 but did not initiate a CPA to address this issue until 2 months after identification.

ESSC initiated CPA report No. 1459 to address this issue.

10 CFR Part 21 Program

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its 10 CFR Part 21 program to verify compliance with 10 CFR Part 21. The NRC inspection team: (1) reviewed the 10 CFR Part 21 postings; (2) reviewed a sample of purchase orders (POs); and (3) verified that ESSC's nonconformance and corrective action programs provide a link to the 10 CFR Part 21 program. No findings of significance were identified.

Design Control

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its design control program to verify compliance with the requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50 and with the applicable requirements of Subsection NCA, "General Requirements for Division 1 and Division 2," of Section III of the ASME B&PV Code. The NRC inspection team verified that the design and procurement specifications were properly translated into ESSC's design drawings, job travelers, procedures, data sheets, analyses, and engineering calculations, as applicable. The NRC inspection team also reviewed a sample of engineering change notices and confirmed design changes were adequately controlled. No findings of significance were identified.

Commercial-Grade Dedication and Utilization of Unqualified Source Material

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its commercial-grade dedication (CGD) program to verify compliance with the requirements of Criterion III and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team also reviewed ESSC's program for the utilization of unqualified source materials to determine compliance with the requirements of subparagraph NCA-4255.5, "Utilization of Unqualified Source Material," of Subsection NCA of Section III of the ASME Code.

The NRC inspection team reviewed the documentation associated with the CGD of the following components: eccentric shaft bearing, emergency diesel generator jacket water heater head gasket, a wye strainer screen assembly, casing and manifold gaskets, various bearings, and an external shaft ring. The documentation included the technical evaluations used to identify the critical characteristics and acceptance criteria to verify that ESSC effectively implemented its CGD process. The NRC inspection team identified two minor issues associated with ESSC's CGD of calibration services and one minor issue with the sampling justification in their Commercial Grade Item Dedication (CGID) Plan.

ESSC initiated CPA report No. 1467 and CPA report No. 1468 to address these minor issues. No findings of significance were identified.

Procurement Document Control and Supplier Oversight

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its procurement document control and supplier oversight programs to verify compliance with the regulatory requirements of Criterion IV, "Procurement Document Control," and Criterion VII of Appendix B to 10 CFR Part 50. The NRC inspection team selected a sample of suppliers to review the methodology for conducting and documenting audits and the review of third-party audits. The NRC inspection team identified two minor issues associated with ESSC's implementation of its supplier oversight program.

ESSC initiated CPA report No. 1465 and CPA report No. 1466 to address these minor issues. No findings of significance were identified.

Control of Special Processes

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its control of special processes program to verify compliance with the requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50, Section III, Section V, and Section IX of the ASME B&PV Code, and of ASNT-TC-1A. The NRC inspection team reviewed ESSC's process for controlling weld filler metal and a sample of welding procedure specifications and procedure qualification reports. The NRC inspection team also performed a walk-down of the weld filler material storage and control area and confirmed that weld filler materials were adequately controlled to prevent degradation, inadvertent use, or loss of traceability. The NRC inspection team reviewed a sample of procedures and test reports associated with magnetic particle testing and radiographic testing. No findings of significance were identified.

Test Control

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its test control program to verify compliance with the requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed test documentation for two recently completed hydrostatic tests and confirmed the testing was performed in accordance with ESSC's test procedures using calibrated M&TE and was performed by qualified individuals. No findings of significance were identified.

Control of Measuring and Test Equipment

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its control of M&TE program to verify compliance with the requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50. The NRC inspection team observed that M&TE was calibrated, labeled, tagged, handled, stored, or otherwise controlled to indicate the calibration status and its traceability to nationally recognized standards. No findings of significance were identified.

REPORT DETAILS

1. Nonconforming Materials, Parts, or Components and Corrective Action

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and procedures that govern the implementation of its nonconformance control and corrective action programs to verify compliance with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

The NRC inspection team reviewed a sample of non-conformance (NC) reports to verify that ESSC: (1) dispositioned the NCs in accordance with the applicable procedures except as noted below; (2) documented an appropriate technical justification for various dispositions; and (3) took adequate corrective action with regard to the nonconforming items. In addition, the NRC inspection team confirmed that the nonconformance process provides a link to the 10 CFR Part 21 program.

The NRC inspection team also reviewed a sample of corrective/preventive action (CPA) reports. The NRC inspection team confirmed that the CPA reports provide a link to the 10 CFR Part 21 program. The NRC inspection team also reviewed ESSC's corrective actions in response to the inspection finding identified in NRC Inspection Report (IR) No. 99901098/2009-201, dated December 8, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093360370).

The NRC inspection team also discussed the nonconforming materials, parts, or components and corrective action programs with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

Corrective Action Associated with Nonconformance 99901098/2009-201-01

The NRC conducted an inspection at ESSC in 2008 as documented in IR No. 99901098/2008-201, dated November 18, 2008 (ADAMS Accession No. ML 083150720). During this inspection, the NRC inspection team issued Nonconformance 99901098/2008-201-06 for ESSC's failure to implement its corrective action program. Specifically, the NRC inspection team identified 4 CPA reports that exceeded the 30 business days disposition requirement as stated in ESSC's nonconformance and corrective action procedure, ESSC Standard Operating Procedure (SOP) Q-16.1, "Nonconformance and Corrective Action Reporting Procedure," Revision 2, dated April 21, 2008, and did not include a documented justification of the extension of the completion dates.

In its response letter to the NRC dated March 3, 2009 (ADAMS Accession No. ML090640300) to address Nonconformance 99901098/2008-201-06, ESSC stated that the reason for noncompliance was because periodic reviews of nonconformances and

corrective actions were not always performed on a weekly basis as originally planned, resulting in lack of priority to timely closures. In addition, extensions of CPA due dates were not utilized in all cases due to oversight in their usefulness in tracking. ESSC initiated CPA No. 1043 to ensure that the ESSC Vice President Quality Assurance (VP QA) and the ESSC Quality Assurance/Quality Control (QA/QC) Supervisor would meet weekly to determine if NC and CPA reports were being addressed in a timely manner. In addition, monthly NC/CPA Status and Trend reports were to be issued to the President for review.

The NRC staff conducted a follow-up inspection at ESSC in 2009 as identified in IR No. 99901098/2009-201, dated December 8, 2009 (ADAMS Accession No. ML093360370). During this inspection, the NRC inspection team asked for the reports from those meetings as identified in CPA No. 1043 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 Q-16.1 to prevent having CPAs open for more than 30 business days. The NRC inspection team reviewed the list of open CPAs and found that there were 24 CPAs past due. ESSC did not provide objective evidence to document the reason or possible extension of the completion dates to complete and disposition the CPAs. As a result, the NRC inspection team closed Nonconformance 99901098/2008-201-06 and issued Nonconformance 99901098/2009-201-01 to document and track this issue.

In its response letter to the NRC dated January 8, 2010 (ADAMS Accession No. ML100250242) to address Nonconformance 99901098/2009-201-01, ESSC stated that the reason for not meeting the 30 business days due date to close out CPA reports was because of inadequate formal documentation of CPA reviews or due date extensions in ESSC's electronic Unipoint CPA system. ESSC initiated CPA No.1098 to address this issue and took corrective actions to complete and close all the open CPA reports that were identified in the 2009 NRC inspection. The response also stated that ESSC's VP QA or QA/QC Supervisor would conduct periodic reviews to determine the NC and CPA reports are being addressed in a timely manner and monthly status & trend report would continue to be issued to the President for review.

During this inspection, the NRC inspection team identified that ESSC is not conducting periodic reviews or issuing the monthly status and trend reports to the President, and as a result, NC and CPA reports are not being promptly addressed. Because ESSC failed to implement corrective actions to address Nonconformance 99901098/2009-201-01, the NRC inspection team identified 2 NC and 13 CPA reports that were past the 30 business days due date as required in ESSC's nonconformance and corrective action procedures, respectively. Subsection 7.2.2 of SOP No. Q15.0, "Nonconformance Reporting Procedure," Revision No. 3, dated May 27, 2021, states, in part, that "NC reports found to be open for more than 30 business days of issue without schedule or reason require additional management actions to address prompt corrective action." In addition, Subsection 6.2.3 of SOP No. Q16.1 states, in part, that "CPA reports found to be open for more than the scheduled completion (normally 30 business days of issue) without schedule or reason shall require immediate additional actions to address prompt corrective action." The NRC inspection team identified this issue as an example of Nonconformance 99902104/2022-201-01 for ESSC's failure to promptly identify and correct significant conditions adverse to quality to ensure that the cause of the condition is determined and corrective action taken to preclude repetition.

During an internal audit performed in July 2022, ESSC identified that NC-3741, NC-3827, CPA-1443, CPA-1457, CPA-1455 and CPA-1451 were open past the 30 business days due date without any justification. However, the NRC inspection team noted that ESSC did not initiate a CPA to address this issue until two months after it was identified. The NRC inspection team identified this issue as another example of Nonconformance 99902104/2022-201-01 for ESSC's failure to promptly identify and correct significant conditions adverse to quality to ensure that the cause of the condition is determined and corrective action taken to preclude repetition. ESSC initiated CPA No. 1459 to address this issue.

As a result, the NRC inspection team closed Nonconformance 99901098/2009-201-01 and issued Nonconformance 99902104/2022-201-01 to document and track this issue.

c. Conclusion

The NRC inspection team issued Nonconformance 99902104/2022-201-01 in association with ESSC's failure to implement the regulatory requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Nonconformance 99902104/2022-201-01 cites ESSC for failing to promptly identify and correct significant conditions adverse to quality to ensure that the cause of the condition is determined, and corrective action taken to preclude repetition.

2. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed ESSC policies and implementing procedures that govern the implementation of its 10 CFR Part 21, "Reporting of Defects and Noncompliance," program to verify compliance with the regulatory requirements. In addition, the NRC inspection team evaluated the 10 CFR Part 21 postings and a sample of ESSC's purchase orders (PO) for compliance with the requirements of 10 CFR 21.21, "Notification of Failure to Comply or Existence of a Defect and its Evaluation," and 10 CFR 21.31, "Procurement Documents." The NRC inspection team also verified that ESSC's nonconformance and corrective action procedures provide a link to the 10 CFR Part 21 program. The NRC inspection team also noted that ESSC has not perform any 10 CFR Part 21 evaluations in the last 2 years.

The NRC inspection team also discussed the 10 CFR Part 21 program with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that ESSC is implementing its 10 CFR Part 21 program in accordance with the regulatory requirements of 10 CFR Part 21. Based on the limited sample of documents reviewed, the NRC inspection team also determined

that ESSC is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

3. Design Control

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its design control program to verify compliance with the regulatory requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50, and the applicable requirements of Subsection NCA, "General Requirements for Division 1 and Division 2," of Section III, "Rules for Construction of Nuclear Facility Components," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code.

The NRC inspection team reviewed a sample of design reports, design specifications, engineering drawings, shop travelers, bill of materials, engineering change notices (ECNs), non-destructive examination (NDE) reports, nonconformance reports, and ASME B&PV Code data reports. Specifically, the NRC inspection team reviewed a design package for an emergency diesel generator (EDG) fuel oil transfer centrifugal pump, size L4, stage 2, 30 GPM capacity, 3500 RPM speed, 15 PSIG head, for the Edwin I. Hatch Nuclear Plant and for a heat exchanger, tube, bundle, stainless steel, 2485 PSI pressure for the McGuire Nuclear Station.

The NRC inspection team confirmed that the customer requirements were adequately translated into the applicable ESSC's drawings, instructions, procedures, and specifications for the fabrication of the pumps and heat exchanger tube bundle. The NRC inspection team also confirmed that for a sample of the documentation associated with the design package, the documentation included the applicable technical and regulatory requirements as required by customer specifications, ESSC's procedures, and the applicable ASME B&PV Code requirements. The NRC inspection team also evaluated how the design specifications were met and how design changes were controlled and approved. In addition, the NRC inspection team verified that the materials of construction and components for the pumps and heat exchanger conformed to the appropriate material specification, design specification, and ASME B&PV Code requirements.

The NRC inspection team concluded that ESSC's design control process was consistent with the applicable regulatory requirements, and that ESSC had correctly translated the design basis into the applicable specifications, drawings, procedures, and instructions. The NRC inspection team verified that ESSC's design control process (1) adequately translated technical and quality requirements into procedures and instructions, (2) applied materials conformed to the material specifications, (3) design activities were effectively controlled by documented instructions and procedures, and (4) design changes were accomplished in accordance with the approved procedures.

The NRC inspection team also discussed the design control program with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that ESSC is implementing its design control program in accordance with the regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the design control program. No findings of significance were identified.

4. Commercial-Grade Dedication and Utilization of Unqualified Source Material

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its commercial-grade dedication (CGD) program to verify their compliance with the regulatory requirements of Criterion III and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team also reviewed ESSC's program for the utilization of unqualified source material to verify compliance with the requirements of Subparagraph NCA-4255.5, "Utilization of Unqualified Source Material," of Section III of the ASME B&PV Code.

The NRC inspection team reviewed samples from several CGD plans of the following components: eccentric shaft bearing, EDG jacket water heater head gasket, a wye strainer screen assembly, casing and manifold gaskets, various bearings, and an external shaft ring to assess the implementation of ESSC's CGD program. The NRC inspection team reviewed the technical evaluations documenting the criteria for the identification of item functions, credible failure mechanisms/modes, selection of critical characteristics and acceptance criteria, and the identification of verification methods.

With respect to ESSC's process for the utilization of unqualified source material, the NRC inspection team reviewed a sample of material Certificate of Conformances, receiving documents, and the supporting laboratory test reports for the following components: (1) stuffing box head, (2) split stuffing box, (3) suction bowl, (4) bowl, and (5) discharge bowl. These components are all part of a safety-related EDG fuel transfer oil pump for the Edwin I. Hatch Nuclear Plant. The NRC inspection team confirmed that test reports included the required chemical analysis and mechanical properties testing in accordance with the material specification that was performed on each piece of material in accordance with the requirements of NCA-4255.5. The NRC inspection team also verified that the test results were consistent and from the same heat number.

The NRC inspection team also discussed the commercial-grade dedication, and utilization of unqualified source material programs with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

The NRC inspection team noted that ESSC performs CGD of calibration services for several laboratories listed on the Approved Vendors List (AVL). In lieu of performing a commercial-grade survey of the laboratories, ESSC implements the guidance from the Nuclear Energy Institute (NEI) document No. 14-05A, "Guidelines for the Use of Accreditation in Lieu of Commercial-Grade Surveys for Procurement of Laboratory Calibration and Test Services," Revision 1, dated September 2020. The NRC staff determined this guidance to be acceptable in a safety evaluation report (SER) dated November 23, 2020 (Agencywide Documents Access Management System Accession No. ML20322A019). In the SER, the NRC staff determined that when purchasing commercial-grade calibration and testing services from domestic and international calibration and testing laboratories accredited by an International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement signatory, licensees and suppliers of basic components may use the ILAC accreditation process in lieu of performing a commercial-grade survey as part of the CGD process provided the conditions from the NEI 14-05A, Revision 1, SER are met.

During the review of a sample of POs for calibration services that were issued after the transition period to the 2017 edition of International Standard Organization (ISO)/International Electrotechnical Commission (IEC) 17025, "General Requirements for the Competence of Testing and Calibration Laboratories," the NRC inspection team noted that the POs: (1) referenced the 2005 edition of the ISO/IEC 17025 and (2) did not invoke two of the conditions listed in the SER. The 2005 edition of ISO/IEC 17025 is no longer valid as it was superseded with the 2017 edition. In addition, ESSC did not invoke in the POs the following conditions: (1) "the customer must be notified of any condition that adversely impacts the laboratory's ability to maintain the scope of accreditation," and (2) "performance of the services listed on this order is contingent on the laboratory's accreditation having been achieved through an on-site accreditation assessment by the Accreditation Body within the past 48 months." The NRC inspection team determine this issue to be minor because the calibration certificates showed that the calibration services were performed in accordance with the 2017 edition of ISO/IEC 17025, and ESSC confirmed that the laboratories' last accreditation assessment was performed on-site.

Furthermore, during the review of the CGD plans, the NRC inspection team noted that ESSC incorrectly listed the conditions from the SER as the critical characteristics required to be verified as part of the CGD process. The critical characteristics for calibration services are already verified as part of the laboratories' accreditation process under ISO/EC 17025-2017 and the conditions from the SER should not be identified as critical characteristics. These conditions are verified as part of the receipt inspection process to ensure that the PO requirements have been met. The NRC inspection team determined this issue to be minor because it is a documentation issue and had no impact on the CGD of the laboratory services.

During the review of several ESSC's CGD plans, the NRC inspection team noted that the technical justification for the sampling basis chosen stated that the lot was determined to be homogeneous because it was ordered from a single manufacturer at the same time with a Certificate of Conformance. During discussions with ESSC's QA personnel, the NRC inspection team discovered that ESSC did not have any documented objective evidence to show that the commercial supplier had established adequate lot and batch controls or verified the validity of the Certificates of Conformance

through a commercial-grade survey. The NRC inspection team identified this issue as minor because ESSC performs receipt inspection of the components and conducts operational tests on the assembled products.

ESSC initiated CPA report No. 1467 and CPA report No. 1468 to address these issues. No findings of significance were identified.

c. Conclusion

With the exception of the minor issues identified above, the NRC inspection team concluded that ESSC is implementing its commercial-grade dedication and utilization of unqualified source material programs in accordance with the regulatory requirements of Criterion III and Criterion VII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the commercial-grade dedication and unqualified source material programs. No findings of significance were identified.

5. Procurement Document Control and Supplier Oversight

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the implementation of its procurement document control and supplier oversight programs to verify compliance with the requirements of Criterion IV, "Procurement Document Control," and Criterion VII of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed ESSC's AVL, a sample of POs, supplier audits, both hybrid (i.e., audits performed with at least one qualified person on-site), and full, in person audits, annual supplier evaluations (i.e., vendor rating reviews), job travelers, and receipt inspection records. For the sample of POs reviewed, the NRC inspection team verified that the POs included, as appropriate: the scope of work, right of access to the suppliers' facilities, conditions and restrictions imposed to sub suppliers, and extension of contractual requirements to sub-suppliers. The NRC inspection team also confirmed that the POs adequately invoked the applicable technical, regulatory, and quality requirements. In addition, the NRC inspection team verified that for the sample of receipt inspection records reviewed (e.g., receipt inspection reports, Certificates of Compliance, and Certificate of Calibration), these records were (1) reviewed by ESSC for compliance with the requirements of the POs, (2) the records were approved by qualified individuals, and (3) the records contained the applicable technical and regulatory information. The NRC inspection team performed a walkdown of the receipt inspection area and discussed the receipt inspection process with ESSC's Quality Control Specialist.

The NRC inspection team selected a sample of suppliers from the AVL to review the methodology for conducting and documenting audits to verify adequate evaluation of the suppliers' controls for meeting the applicable requirements of Appendix B to 10 CFR Part 50. For the sample of supplier audits reviewed, the NRC inspection team verified the following: the audit reports included an audit plan; audits were performed according to established frequency; audit reports included adequate documented objective evidence of compliance with the applicable requirements; and audit documentation was reviewed by ESSC's responsible management. For the hybrid supplier audit, the NRC

inspection team reviewed the specific activities that were performed in person and those activities that were performed remotely and confirmed that adequate controls were in place, consistent with NRC guidance for performing hybrid/remote audits. The NRC inspection team also verified that the supplier audits were performed by qualified auditors and audit findings were documented and resolved in the ESSC's and the suppliers' corrective action programs. In addition, the NRC inspection team reviewed a sample of training and qualification records of ESSC's lead auditors and confirmed that auditing personnel had completed all the required training and had maintained the applicable qualification and certification in accordance with ESSC's policies and procedures.

The NRC inspection team also discussed the procurement document control and supplier oversight programs with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

During the review of a sample of external audits and discussions of the audit schedules with ESSC QA personnel, the NRC inspection team noted that for one safety related supplier, the existing 90-day grace period for completing the triennial vendor audit had expired and ESSC implemented a 25% extension of the audit frequency. However, ESSC did not perform the evaluation of the suppliers' implementation of its Quality Assurance (QA) program in accordance with the requirements of Section 7.5.5, "Exigent Conditions," of ESSC's Nuclear Quality Assurance Manual (NQAM). According to ESSC's NQAM, this evaluation is needed to adopt a 25% extension of the audit frequency during exigent conditions. Instead, ESSC maintained the supplier in the AVL, continued using the supplier, and opened a CPA almost 9 months after the audit expiration date to track the issue.

The NRC inspection team determined this issue to be minor because ESSC assessed the supplier's performance during their annual vendor rating reviews, performed receipt inspection of the components, and the results of these inspections provide reasonable assurance that the suppliers are providing products that meet the applicable requirements. In addition, ESSC performed a full scope audit of this supplier approximately 9 months after the audit expiration date and no findings were identified during the full scope audit. This was the only instance in which ESSC implemented the 25% extension for audits during exigent conditions. ESSC initiated CPA report No. 1465 to address this issue.

ESSC performs annual supplier evaluations through annual vendor rating reviews. In accordance with ESSC's NQAM and ESSC's Standard Operating Procedure Q7.6, "Vendor Ratings Procedure," Revision 0, dated May 29, 2020, these rating reviews only consider the number of vendor shipments received early and on-time, and the number of non-conformance reports (NCs) issued in the specified time frame. However, ESSC did not consider, where applicable, other important aspects associated with annual supplier evaluations (e.g., review of supplier documents, review of corrective actions, review of operating experience, results of audit from previous sources, etc.) to ensure these suppliers continue to adequately implement the approved QA program.

It is the NRC's regulatory position that vendors should perform annual evaluations of their suppliers. Specifically, these annual evaluations should take the following considerations into account, where applicable: (a) the review of supplier-furnished documents and records such as certificates of conformance, nonconformance notices, and corrective actions; (b) results of previous source verifications, audits, and receiving inspections; (c) operating experience of identical or similar products furnished by the same supplier and results of audits from other sources (e.g., NRC inspection reports).

The NRC inspection team determined this issue to be minor because ESSC assesses the supplier's performance during their annual vendor rating reviews, performs inspections as part of the receipt inspection process, and the results of these inspections provide reasonable assurance that the suppliers are providing products that meet the applicable requirements. ESSC initiated CPA report No. 1466 to address this issue.

No findings of significance were identified.

c. Conclusion

With the exception of the minor issues identified above, the NRC inspection team concluded that ESSC is implementing its procurement document control and supplier oversight programs in accordance with the regulatory requirements of Criterion IV and Criterion VII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the supplier oversight program. No findings of significance were identified.

6. Control of Special Processes

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and procedures that govern the implementation of its control of special processes program to verify compliance with the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50 and with the requirements of Section III, Section V, "Nondestructive Examination," and Section IX, "Welding and Brazing Qualification," of the ASME B&PV Code, and American Society for Nondestructive Testing (ASNT) SNT-TC-1A, "Personnel Qualification and Certification in Nondestructive Testing." There were no safety-related welding or non-destructive examination (NDE) activities performed during the week of the inspection. As such, the NRC inspection team reviewed a sample of welding and NDE records for: (1) a completed stainless steel heat exchanger tube bundle for the McGuire Nuclear Station and (2) an EDG fuel oil transfer pump for the Edwin I. Hatch Nuclear Plant.

The NRC inspection team verified that the Welding Procedure Specifications (WPSs) and associated Procedure Qualification Records (PQRs) contained the applicable welding data (e.g., procedure used, type of weld filler material, etc.) in accordance with the requirements of Section IX of the ASME B&PV Code and ESSC's procedures. In addition, the NRC inspection team reviewed ESSC's process for controlling weld filler material. The NRC inspection team performed a walk-down of the weld filler material storage and control area and confirmed that weld filler material was adequately

controlled to prevent degradation, inadvertent use, or loss of traceability in accordance with ESSC's requirements.

The NRC inspection team reviewed a sample of procedures and test reports associated with magnetic particle testing (MT) and radiographic testing (RT) of the heat exchanger tube bundle and the EDG fuel oil transfer pump and confirmed that the NDE reports contained the required information in accordance with Section V of the ASME B&PV Code and ESSC's requirements and were performed by qualified personnel.

The NRC inspection team also reviewed a sample of welder qualification and training records and confirmed that welders had completed the required training and had maintained their qualifications in accordance with ESSC requirements. In addition, the NRC inspection team also verified that ESSC's procedure for welder qualification meets the applicable requirements of Sections III and IX of the ASME B&PV Code.

Furthermore, for a sample of training and qualification records for NDE personnel, the NRC inspection team confirmed that they were qualified in accordance with the requirements of ASNT SNT-TC-1A and ESSC's requirements.

The NRC inspection team also discussed the control of special processes program with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observation and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that ESSC is implementing its control of special processes program in accordance with the regulatory requirements of Criterion IX of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the control of special processes program. No findings of significance were identified.

7. Test Control

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and procedures that govern the implementation of its test control program to verify compliance with the requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50.

The NRC inspection team also reviewed the test records for two recently completed hydrostatic tests and confirmed that all the test requirements were met. The NRC inspection team confirmed that both tests were performed using properly calibrated measuring and test equipment (M&TE). For both tests, the NRC inspection team verified that ESSC's test procedures adequately included the applicable technical, quality, and regulatory requirements. The NRC inspection team also confirmed that the following testing elements were satisfied, verified, and recorded, as appropriate: (1) test parameters and initial conditions, (2) test acceptance criteria, (3) test prerequisites, (4)

test instrument range, accuracy, and uncertainty appropriate for the test; (5) current calibration, and (6) any deviations documented and evaluated.

The NRC inspection team also discussed the test control program with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that ESSC is implementing its test control program in accordance with the regulatory requirements of Criterion XI of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the test control program. No findings of significance were identified.

8. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed ESSC's policies and implementing procedures that govern the M&TE program to verify compliance with the requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50.

For a sample of M&TE, the NRC inspection team determined that the M&TE had the appropriate calibration stickers and current calibration dates, including the calibration due date. The NRC inspection team also verified that the M&TE had been calibrated, adjusted, and maintained at prescribed intervals prior to use. In addition, the calibration records reviewed by the NRC inspection team indicated the as-found or as-left conditions, accuracy required, calibration results, calibration dates, and the due date for recalibration. Furthermore, the NRC inspection team also verified that the selected M&TE was calibrated using procedures traceable to known industry standards. The NRC inspection team confirmed that when M&TE equipment is found to be out of calibration, ESSC generates an NC report to identify items that have been accepted using this equipment since the last valid calibration date and to perform an extent of condition review.

The NRC inspection team verified that M&TE were labeled, handled, and stored in a manner that indicated the calibration status of the instrument and ensured its traceability to calibration test data. The NRC inspection team observed the calibration of a 6-inch caliper and confirmed that the calibration was performed in accordance with ESSC's procedures.

The NRC inspection team also discussed the M&TE program with ESSC's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that ESSC is implementing its M&TE program in accordance with the regulatory requirements of Criterion XII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that ESSC is implementing its policies and procedures associated with the M&TE program. No findings of significance were identified.

9. Entrance and Exit Meetings

On September 26, 2022, the NRC inspection team discussed the scope of the inspection with Mr. Marcus Alexander, ESSC's President, and other members of ESSC's management and technical staff. On September 30, 2022, the NRC inspection team presented the inspection results and observations during an exit meeting with Mr. Alexander and other members of ESSC's management and technical staff. The attachment to this report lists the attendees of the entrance and exit meetings, as well as those individuals whom the NRC inspection team interviewed.

ATTACHMENT

1. ENTRANCE/EXIT MEETING ATTENDEES

Name	Title	Affiliation	Entrance	Exit	Interviewed
Marcus Alexander	President	Energy Steel & Supply Company (ESSC)	X	X	
Bruce Nagel	Quality Assurance (QA) Director	ESSC	X	X	X
Michael Kirkland	QA Lead Auditor	ESSC	X	X	X
Brooke Morris	Senior Project Manager	ESSC	X	X	
Nathan Goldsmith	Engineering Manager	ESSC	X	X	X
Katherine Itchue	Project Engineer	ESSC	X	X	
Antonio Balabani	Project Engineer	ESSC	X		
Dan Dixon	Shop Foreman	ESSC	X		
Mike Lonsberry	Sales Director	ESSC	X		
Kim Congdon	QA Specialist	ESSC			X
Vera Aladjova	QA Specialist	ESSC			X
Steve Simoski	QA Specialist	ESSC			X
Troy Guthrie	QA Specialist	ESSC			X
Deanna Zhang	Acting Branch Chief	Nuclear Regulatory Commission (NRC)		X*	
Dong Park	Inspection Team Leader	NRC	X	X	
Yamir Diaz-Castillo	Inspector	NRC	X	X	
Frankie Vega	Inspector	NRC	X	X	
Yiu Law	Inspector	NRC	X*	X*	

*Participated Remotely

2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated May 16, 2019

IP 43002, "Routine Inspections of Nuclear Vendors," dated April 5, 2022

IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated April 5, 2022

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Type	Description
99901098/2009-201-01	CLOSED	Notice of Nonconformance (NON)	Criterion XVI
99902104/2022-201-01	OPENED	NON	Criterion XVI

4. DOCUMENTS REVIEWED

Policies and Procedures

- Energy Steel & Supply Company (ESSC) Nuclear Quality Assurance Manual, Issue No. 7, Revision No. 3, dated December 1, 2021
- ESSC Standard Operating Procedure (SOP) Q2.1, "Quality Inspector Qualification Procedure," Revision 4, dated April 15, 2021
- ESSC SOP Q2.2, "QA Specialist Training and Qualification Procedure," Revision 3, dated April 15, 2021
- ESSC SOP Q2.3, "Auditor and Lead Auditor Qualification Procedure," Revision 5, dated May 17, 2021
- ESSC SOP Q2.4, "Certifying Engineer (RPE) Qualification Procedure," Revision 2, dated May 17, 2021
- ESSC SOP Q2.5, "Qualification of Personnel for Certifying Welding Qualification Documents," Revision 0, dated September 15, 2020
- ESSC SOP Q3.1, "Job/Contract Review Procedure," Revision 3, dated May 21, 2021
- ESSC SOP Q3.3, "Design Control of Customer Designed Components Fabricated by Energy Steel and Supply Company," Revision 1, dated February 19, 2016
- ESSC SOP Q3.5, "Process Controls for Legacy Manufacturers," Revision 3, dated June 1, 2016

- ESSC SOP Q3.6, "Safety Related Reverse Engineering," Revision 1, dated August 12, 2019
- ESSC SOP Q3.7, "Design Report Review," Revision 0, dated December 12, 2018
- ESSC SOP Q5.1, "Procedure for Development and Control of Energy Steel Drawings," Revision 8, dated May 13, 2019
- ESSC SOP Q5.2, "Development & Control of ESSC Jobs and Shop Travelers," Revision 4, dated June 2, 2021
- ESSC SOP Q5.3, "Development & Control of Energy Steel Forms," Revision 5, dated May 24, 2021
- ESSC SOP Q5.4, "Development & Control of Energy Steel Written Procedures," Revision 4, dated June 2, 2021
- ESSC SOP Q7.1, "Receipt Inspection Procedure," Revision 5, dated May 21, 2021
- ESSC SOP Q7.2, "Commercial Grade Dedication," Revision 11, dated July 29, 2019
- ESSC SOP Q7.3, "Control of Subcontracted Services," Revision 3, dated January 26, 2022
- ESSC SOP Q7.4, "Approved Vendors List Control Procedure", Revision 5, dated May 27, 2021
- ESSC SOP Q7.6, "Vendor Ratings Procedure", Revision 0, dated May 29, 2020
- ESSC SOP Q8.1, "Procedure for Marking ASME Section III Material for Shipment", Revision 5, dated May 27, 2021
- ESSC SOP Q9.1, "Control of Special Processes", Revision 1, dated August 19, 2019
- ESSC SOP Q10.4, "Source Inspection/Surveillance", Revision 1, dated May 27, 2021
- ESSC SOP Q11.1, "Hydrostatic Testing Procedure," Revision 6, dated January 18, 2022
- ESSC SOP Q12.0, "Control of Measuring and Test Equipment," Revision 6, dated July 5, 2022
- ESSC SOP Q12.1, "Calibration of Micrometers, Calipers and Indicators," Revision 9, dated December 18, 2006
- ESSC SOP Q-15.0, "Nonconformance Reporting Procedure", Revision 3, dated May 27, 2021
- ESSC SOP Q-15.1, "Reporting of Defects Procedure (10 CFR Part 21 Evaluation and Reporting)", Revision 9, dated May 27, 2021

- ESSC SOP Q-16.1, "Corrective Action Reporting Procedure", Revision 4, dated May 28, 2021
- ESSC SOP Q-18.1, "Internal Audit Procedure", Revision 4, dated June 7, 2021
- ESSC SOP Q-18.2, "External Audit Procedure", Revision 7, dated June 7, 2021
- ESSC SOP Q-18.3, "Management Review Procedure," Revision 4, dated November 1 June 7, 2021
- NDE-VT-01, "Visual Weld Inspection NDE Procedure," Revision 12, dated October 22, 2021
- NDE-PT-VSR-01, "Liquid Penetrant (Solvent Removable) NDE Procedure," Revision 19, dated October 21, 2021
- WM-AP, "Welding Program Manual - Administrative Procedure Welding Program," Revision 6, dated December 6, 2018
- WM-FMC, "Welding Program Manual - Weld Filler Metal Control," Revision 6, dated January 29, 2019

Design and Commercial-Grade Dedication Records

- Drawing No. 2732-GA, "EDG Fuel Oil Transfer Pump w/o Motor Fig 4703, Ref. Dwg. S-52649, Rev. A," Revision 6
- Data Package for Energy Steel Work Order No. 43733 for a heat exchanger, tube, bundle, stainless steel, 2485 PSI pressure for Duke Energy
- Data Package for Energy Steel Work Order No. 43489 for a centrifugal pump, size L4, stage 2, 30 GPM capacity, 3500 RPM speed, 15 PSIG head for Georgia Power Company
- Engineering Change Notice (ECN) No. 1697, "Added Strainer and Gasket BOM," Revision 1, dated August 13, 2020
- ECN No. 1727, "Added Motor Adapter," Revision 2, dated April 16, 2021
- ECN No. 1745, "Added ASTM Call Outs for Nonsafety Material," Revision 3, dated May 10, 2021
- ECN No. 1746, "83B and 93E Changed to NS," Revision 4, dated May 20, 2021
- ECN No. 1759, "Updated Title Block," Revision 5, dated October 4, 2021
- ECN No. 1774, "Updated BOM Descriptions and Balloons, Removed Motor Gib Key, Adjusted Shaft Location," Revision 6, dated April 20, 2022

- Summary Report on Seismic Analysis of a Vertical Motor for a Crane-Deming Vertical Turbine Pump, Figure 4703, Size 4-inch, Revision 1, dated April 6, 1994
- Design Specification for Emergency Diesel Fuel Oil Transfer Pumps for Plant Hatch Units 1 & 2, dated January 4, 1972
- Contract/Job Plan Review Checklist for a Crane EDG Fuel Oil Transfer Pump, Job No. 43489, dated July 22, 2022
- Job Data Matrix for Job No. 43489, dated September 20, 2022
- Commercial-Grade Item Dedication Plan No. Cal/Vend 17025, "Calibration Services by ISO 17025:2017 Accredited Suppliers," Revision 0, dated July 28, 2022
- Commercial Grade Item Dedication (CGID) Plan No. 44015, Charging Pump Eccentric Shaft Bearing, dated February 9, 2021
- CGID Plan No. 44059, 3.00" 150# Wye Strainer Screen Assembly, dated June 10, 2021
- CGID Plan No. 44664, Emergency Diesel Generator Jacket Water Heater Head Gasket, dated April 18, 2022
- CGID Plan No. 44577, Casing Gasket, dated February 10, 2022
- CGID Plan No. 44578, Casing Gasket and Manifold Gasket, dated February 10, 2022
- CGID Plan No. 43489-DBB, Discharge Bowl Bearing, Revision 1, dated April 11, 2022
- CGID Plan No. 43489-CIB, Column Intermediate Bearing, dated March 31, 2022
- CGID Plan No. 43489SKF, Upper Shaft Ball Bearing, Revision 1, dated August 19, 2021
- CGID Plan No. 43489SR, External Shaft Ring, Revision 2, dated March 24, 2022

American Society of Mechanical Engineers (ASME) and Welding Records

- Visual Weld Inspection Report for Job Traveler No. 43733A, Component ID NPT43733-1, Weld Joint Nos. W1 thru W24, W25-1, W25-2, W26-1, W26-2, W27-1, and W27-2, dates November 11, 2020, for W1 thru W24, W25-1, W25-2, W26-1, W26-2, W27-1, and W27-2, dated November 20, 2020
- Welding Procedure Specification (WPS) No. A0808.T.NN1, qualified to ASME Section IX 2013, GTAW of Austenitic Stainless Steel (P8) to Austenitic Stainless Steel, Revision 1, dated January 7, 2015
- Procedure Qualification Record (PQR) No. 0808-1, ASME Section IX 2013, Manual GTAW, SA-240 plate, dated September 12, 2014

- PQR No. 0808-3, ASME Section IX 2013, Manual GTAW, SA-240 plate, dated December 31, 2014
- ASME IX Welder Performance Qualification Record No. NJG-6T1-1G, dated July 12, 2019
- Visual Weld Inspection Report for Job Traveler No. 43489A06, Component ID N43489A06-1, Weld Joint Nos. W01, W05, and W06, dated March 3, 2022
- Visual Weld Inspection Report for Job Traveler No. 43489A05R, Component ID N43489A56-1, Weld Joint Nos. W3 and W4, dated January 17, 2022
- Visual Weld Inspection Report for Job Traveler No. 43489A06RW, Component ID N43489A06-1, Weld Joint Nos. W2, W3, W4, W7, and W8, dated July 23, 2021
- WPS No. A11-TM.NI1, qualified to ASME Section IX, Manual GTAW and Semi-Automatic GMAW, Revision 0, dated September 8, 2011
- PQR No. WA11-5.5CH, GTAW/GTAW-Spray, SA-516, dated May 4, 2007
- ASME IX Welder Performance Qualification Record No. MJT-ASMEIX-6G-TF-1, dated December 1, 2016

Non-Destructive Examination, Inspection and Test Records

- Certificate of Conformance Order No. 30258, dated March 22, 2022
- Certificate of Conformance Order No. 30358, dated April 20, 2022
- Certificate of Conformance Order No. 30293, Job No. 44577, dated September 7, 2022
- Certificate of Conformance Order No. 30293, Job No. 44578, dated September 7, 2022
- Energy Steel's Certificate of Conformance for Job No. 43733, dated December 28, 2020
- Energy Steel's Certificate of Conformance for Job No. 43489, dated September 21, 2022
- Receipt Inspection report for Job 44013 (Purchase Order (PO) No. 29516)
- Receipt Inspection report for Job 43876 (PO No. 29117)
- Receipt Inspection report for Job 46003 (PO No. 29995)
- Production Inspection Report for a Stuffing Box Head, MIC No. T44907, dated July 28, 2020
- Certificate of Conformance for a Stuffing Box Head, Alloy 316 per ASTM A351, Grade CF8M, MIC No. T44907, dated September 23, 2020

- Chemical and Mechanical Analysis Test Report for a Stuffing Box Head, .375 x 3.50 inches, MIC No. T44907, per ASME SA351, Section III, Part A, 1971 Edition, Gr/Type: CF8M, Job No. 43489A13, Heat Code ASDT
- Production Inspection Report for a Split Stuffing Box, MIC No. T44901, dated September 11, 2020
- Certificate of Conformance for a Split Stuffing Box, Alloy 316 per ASTM A351, Grade CF8M, MIC No. T44901, dated September 9, 2020
- Chemical and Mechanical Analysis Test Report for a Split Stuffing Box, .375 x 3.50 inches, MIC No. T44901, per ASME SA351, Section III, Part A, 1971 Edition, Gr/Type: CF8M, Job No. 43489A11, Heat Code ASDT
- Production Inspection Report for a Suction Bowl, MIC No. T44905, dated July 28, 2020
- Certificate of Conformance for a Suction Bowl, Alloy 316 per ASTM A351, Grade CF8M, MIC No. T44901, dated September 23, 2020
- Chemical and Mechanical Analysis Test Report for a Suction Bowl, .375 x 3.50 inches, MIC No. T44905, per ASME SA351, Section III, Part A, 1971 Edition, Gr/Type: CF8M, Job No. 43489A09, Heat Code ASDT
- Production Inspection Report for a Bowl, MIC No. T44908, dated July 28, 2020
- Certificate of Conformance for a Bowl, Alloy 316 per ASTM A351, Grade CF8M, MIC No. T44908, dated September 11, 2020
- Chemical and Mechanical Analysis Test Report for a Bowl, .375 x 3.50 inches, MIC No. T44908, per ASME SA351, Section III, Part A, 1971 Edition, Gr/Type: CF8M, Job No. 43489A14, Heat Code ASDT
- Production Inspection Report for a Discharge Bowl, MIC No. T44906, dated October 6, 2020
- Certificate of Conformance for a Discharge Bowl, Alloy 316 per ASTM A351, Grade CF8M, MIC No. T44906, dated September 23, 2020
- Chemical and Mechanical Analysis Test Report for a Discharge Bowl, .375 x 3.50 inches, MIC No. T44906, per ASME SA351, Section III, Part A, 1971 Edition, Gr/Type: CF8M, Job No. 43489A10, Heat Code ASDT
- Material Specification SA-351, "Specification for Ferritic and Austenitic Steel Castings for High Temperature Service," ASME B&PV Code Section II, Section II, Material Specifications, Part A - Ferrous, 1971 Edition, 1972 & 1973 Addenda
- Liquid Penetrant Examination Report for weld areas W-1 and W-2 for ESSC Work Order No. 43733A, Component ID NPT43733-1, dated November 11, 2020
- Liquid Penetrant Examination Report for weld areas W25-1R and W25-2R for ESSC Work Order No. 43733AR2, dated December 4, 2020

- Liquid Penetrant Examination Report for weld areas W01, W05, and W06 for ESSC Work Order No. 43489A06, Component ID N43489A06-1, dated March 2, 2022
- Liquid Penetrant Examination Report for weld areas W3, and W4 for ESSC Work Order No. 4389A06R2, Component ID N43489A06-1, dated January 17, 2022
- Liquid Penetrant Examination Report for weld areas W2, W3, W4, W7, and W8 for ESSC Work Order No. 43489A06RW, Component ID N43489A06-1, dated July 23, 2021
- Radiographic Examination Report for welds W25-1R and W25-2R ESSC Work Order No. 43733A, December 7, 2020
- Traveler No. 43489A06R2 for a rework fabricated head, Revision 0
- Traveler No. 43489A14 for a bowl, Revision 2
- Traveler No. 43489A09 for a suction bowl, Revision 2
- Traveler No. 43489A11 for a split stuffing box, Revision 3
- Traveler No. 43838RW03 for an impeller cast, Revision 0

Measuring and Test Equipment Records

- Certificate of Calibration No. 351175-328142 for a pressure gage, gage ID PG023, serial No. 110DQ3FY, Revision 1, dated August 1, 2022
- Certificate of Calibration No. 356638-50792 for a thread ring, gage ID PRG008, serial No. 4557074, dated Revision 1, dated September 20, 2022
- Certificate of Calibration for a durometer, ID 4634, serial No. 112637, dated March 8, 2022
- Certificate of Calibration No. 2022001710 for a thermocouple, gage ID CT003, serial No. HKU5BA004, dated February 17, 2022
- Certificate of Calibration No. 2022007293 for a profilometer, gage ID PRF004, serial No. 17371783, dated June 30, 2022
- Certificate of Calibration No. 213605 for a digital light meter, model No. 5URG1 USB, serial No. 1110163224, dated August 16, 2021
- Certificate of Calibration No. 224375 for a digital light meter, model No. 5URG1 USB, serial No. 1110163224, dated September 15, 2022
- Certificate of Calibration No. 338403-328142, Revision 3, dated March 10, 2022
- Active Equip Maintenance/Repair Schedule for September 2022

- Maintenance Ticket No. 4177, PG021, 0-300 PSI Pressure Gage, dated September 29, 2022
- Maintenance Ticket No. 3928, PG016, 0-6000 PSI Pressure Gage, dated December 28, 2021
- Maintenance Ticket No. 4356, DC016, 6" Digital Caliper, dated September 29, 2022
- Maintenance Ticket No. 4161, PG023, 0-145 PSI Pressure Gage, dated March 10, 2022
- Calibration Sticker for Temperature Humidity Alarm, Item No. 60054292, dated April 7, 2022
- Calibration Sticker for CERA Block, Item No. GB004, dated June 23, 2021
- Calibration Sticker for PG023, 0-145 PSI Pressure Gage, dated August 1, 2022
- Calibration Sticker for PG016, 0-6000 PSI Pressure Gage, dated June 16, 2022

Purchase Orders

- PO No. 28758 for several pieces of unqualified source material, Revision 2, dated March 4, 2020
- PO No. 30218 for calibration of a thermocouple, dated February 10, 2022
- PO No. 30496 for calibration of a profilometer, dated June 23, 2022
- PO No. 29873 for calibration of a digital light meter, dated August 2, 2021
- PO No. 30584 for a digital light meter, dated August 10, 2022
- PO No. 30250 for calibration of a durometer, dated March 3, 2022
- PO No. 28983 for testing services, Revision 1, dated May 22, 2020
- PO No. 28986 for stainless steel tubing, Revision 0, dated May 26, 2020
- PO No. 29345 for non-destructive examination services, Revision 1, dated November 5, 2020
- Duke Energy's PO for a heat exchanger, tube, bundle, stainless steel, 2485 PSI, January 15, 2020
- Georgia Power's PO for a centrifugal pump, size L4, stage 2, 30 GPM capacity, 3500 RPM speed, 15 PSIG head, Revision 7, dated November 13, 2020
- PO No. 30520 for calibration of a pressure gages, dated July 6, 2022
- PO No. 30587 for calibration of several thread plugs, dated August 15, 2022

- Job No. 44015, Customer PO No. 10633014, Bearing, Eccentric Shaft, Dated February 4, 2021
- Job No. 44015, Customer PO No. 10633014, Revision 1, Bearing, Eccentric Shaft, Dated June 24, 2021
- Job No. 44015, Customer PO No. 10633014, Revision 2, Bearing, Eccentric Shaft, Dated July 8, 2022
- PO No. 29523, Eccentric Shaft Bearing Dated February 4, 2021
- PO No. 30436, Eccentric Shaft Bearing Dated June 13, 2022
- PO No. 30135, Bearing Material Testing, dated February 22, 2022
- Job No. 44664, Customer PO No. 792668, Gasket, Heat Exchanger Head, dated March 4, 2022
- Job No. 44664, Customer PO No. 792668/1, Gasket, Heat Exchanger Head, dated March 10, 2022
- PO No. 30258, Gasket, dated March 7, 2022
- PO No. 30358, Gasket, dated April 15, 2022
- Job No. 44577, Customer PO No. 4000023248, Gasket, Casing, dated December 23, 2021
- Job No. 44577R, Customer PO No. 4000023248, Gasket, Casing, dated March 24, 2022
- Job No. 44577R2, Customer PO No. 4000023248, Gasket, Casing, dated May 26, 2022
- PO No. 30134, Gasket, dated December 23, 2021
- PO No. 30293, Gasket, dated March 24, 2022
- PO No. 4000023248, Gasket, Casing, dated May 26, 2022
- PO No. 30135, Gasket, Casing Material Testing, dated December 23, 2021
- Job No. 44578, Customer PO No. 4000023248, Gasket, Bundle, dated December 23, 2021
- Job No. 44578R, Customer PO No. 4000023248, Gasket, Bundle, dated March 24, 2022
- Job No. 44577R2, Customer PO No. 4000023248, Gasket, Bundle30358, dated May 26, 2022

- PO No. 29516, dated February 1, 2021
- PO No. 29117, dated October 5, 2020
- PO No. 29292, dated October 14, 2020
- PO No. 28293, dated July 31, 2019
- PO No. 28983, dated May 22, 2020
- PO No. 28525, dated December 4, 2019
- PO No. 28465, dated November 06, 2019
- PO No. 29948, dated September 23, 2021
- PO No. 29950, dated September 23, 2021
- PO No. 29433, dated December 17, 2020
- PO No. 30331, dated April 6, 2022
- Traveler for Job No. 43876 (PO No. 29117)
- Traveler for Job No. 44013 (PO No. 29516)

Audit Reports

- Internal Audit Report No. 0676-2022-01, dated July 12-14, 18-20, 25-26, 2022
- External Audit report No. 0676-2020-1, audit conducted on January 19-22, 2020
- External Audit report No. 3300-2101, audit conducted on April 28-30, 2021
- External Audit report No. 0105-2201, audit conducted on March 7-8, 2022
- External Audit report No. 0323-2021, audit conducted on February 9-11, 2021
- External Audit Report No. 27066, audit conducted on April 12-13, 2022
- External Audit Report No. 27069, audit conducted on May 23-25, 2022
- External Audit Report No. 4079-2001, audit conducted on February 17-18, 2020
- External Audit report No. 4086-2022-1, audit conducted on August 1-2, 2022
- External Audit report No. 3946-2101, audit conducted on June 15-17, 2021
- Energy Steel Rating Report No. 52201, dated January 22, 2021

- Nuclear Industry Assessment Corporation (NIAC) Audit Report No. 27030
- NIAC Audit Report No. 26080
- NIAC Audit Report No. 27089

Nonconformance Records

- 1407, 1408, 1428, 1449, 3740, 3741, 3720, 3794, 3802, 3824, 3827, 3833, 3836, 3841, 3864, 3868, 3845, 3734, 3710, 3685 and 3859

Corrective Action Records

- 1024, 1027, 1031, 1043, 1098, 1412, 1413, 1429, 1435, 1441, 1443, 1449, 1451, 1455, 1457, 1459, 1460, and 1462

Corrective Action Requests Opened During the NRC Inspection

- 1465, 1466, 1467, 1468, and 1469

Hold Tags

- H13673 A/N No. PG021, 0-300 PSI Gage, dated September 29, 2022
- H13582 Tag No. 46003, Nonconformance (NCR) No. 3845, dated May 18, 2022
- H13650 Tag No. 44154AR, NCR No. 3859, dated September 6, 2022

Test Records

- Hydrostatic Test Data Sheet, Tube Heat Exchanger, Work Order No. 43733
- Hydrostatic Test Data Sheet, Fuel Pump, Work Order No. 43489

Personnel Qualification Records

- Lead Auditor qualification records for Robert J. Paton and Mike Kirkland
- Quality Control Inspectors qualification records for Robert Erickson and Troy Guthrie
- Training and Qualification Record for Fakher Maxwell Habib Yossif, Non-destructive Examination Level III
- Training and Qualification Record for Troy Guthrie, Non-destructive Examination Level II