

May 4, 2017

Mr. Dan Bolling
Product Assurance Manager
L&S Machine Company
P.O. Box 391
709 Donohoe Road
Latrobe, PA 15650

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT OF
L&S MACHINE COMPANY NO. 99901476/2017-201, AND NOTICE OF
NONCONFORMANCE

Dear Mr. Bolling:

On March 20-23, 2017, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the L&S Machine Company (hereafter referred to as L&S) facilities in Latrobe, PA and Marion Center, PA. The purpose of this limited-scope routine inspection was to assess L&S' compliance with 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 L&S' implementation of quality activities associated with the fabrication of safety-related fuel assembly components for the Westinghouse Electric Company. The enclosed report presents the results of the inspection. This NRC inspection report does not constitute NRC endorsement of L&S' overall quality assurance (QA) program.

The NRC inspection team found that the implementation of your QA program did not meet certain regulatory requirements imposed on you by your customers. Specifically, the NRC inspection team determined that L&S was not fully implementing its QA program in the areas of Corrective Action, Control of Purchased Material, Equipment, and Services, and Audits. 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), L&S should document the results of the extent of condition review for these findings and determine if there are any effects on other safety-related components.

Please provide a written explanation or statement 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 (and if applicable), 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, 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,

/RA/

John P. Burke, Chief
Quality Assurance Vendor Inspection Branch-2
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No.: 99901476

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99901476/2017-201
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT OF
L&S MACHINE COMPANY NO. 99901476/2017-201, AND NOTICE OF
NONCONFORMANCE
Dated: May 4, 2017

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NAME	JOrtega-Luciano	RPatel	AFerguson
DATE	05/03/2017	05/03/2017	05/03/2017
OFC	NRO/DCIP/QVIB-1	NRO/DCIP	NRO/DCIP/QVIB-2
NAME	PNatividad	SSmith (CWeber for)	JBurke
DATE	05/03/2017	05/03/2017	05/04/2017

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NOTICE OF NONCONFORMANCE

L&S Machine Company
P.O. Box 391
709 Donohoe Road
Latrobe, PA 15650

Docket No. 99901476
Report No. 2017-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the L&S Machine Company (hereafter referred to as L&S) facilities located at Latrobe, PA and Marion Center, PA, from March 20, 2017, through March 23, 2017, L&S did not conduct certain activities in accordance with NRC requirements that were contractually imposed upon L&S by its customers:

- A. Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50 states, in part, that "... measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery."

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 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."

Contrary to the above, as of March 23, 2017, L&S failed to establish measures for source evaluation and provide objective evidence of quality furnished by a contractor or subcontractor. Also, L&S failed to ensure that conditions adverse to quality are promptly identified and corrected. Specifically, L&S closed out corrective action report (CAR) NC621 on October 16, 2015 without completing the corrective actions to evaluate all suppliers prior to designating them on the Approved Supplier List (ASL). Subsequently, L&S added Tooling Specialist Inc. (TSI) as a safety-related approved supplier on their ASL and issued a safety-related purchase order (PO) to TSI on October 19, 2015 for the procurement of coordinate measuring machine (CMM) inspection services. However, the initial audit to qualify TSI on the ASL was not conducted until February 1, 2017. As a result of L&S' inadequate corrective actions to evaluate and qualify its suppliers, L&S failed to verify that TSI's quality assurance program was qualified to perform safety-related CMM inspection services.

This issue has been identified as Nonconformance 99901476/2017-201-01.

- B. Criterion XVIII, "Audits," of Appendix B to Title 10 Part 50, states, in part, that "...audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited."

Subsection 3.18.1.4 of L&S' Quality Assurance Manual, LSM_QAM_001, Revision 10 dated October 15, 2016, states that, "Audits are performed by qualified personnel, independent of the activity being assessed, using written procedures and/or checklists, as appropriate."

Contrary to the above, as of March 23, 2017, L&S failed to ensure that audits were performed by personnel not having direct responsibilities in the areas being audited. Specifically, the NRC inspection team identified that for internal audits conducted between 2013 and 2016 at the L&S facilities located at Latrobe and Marion Center, the Production Assurance Manager and the Director of Quality participated as a member of the audit team and audited areas for which they had direct responsibility.

This issue has been identified as Nonconformance 99901476/2017-201-02.

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 Vendor Inspection 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 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 SGI 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 the 4th day of May 2017.

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

Docket No.: 99901476

Report No.: 99901476/2017-201

Vendor: L&S Machine Company
P.O. Box 391
709 Donohoe Road
Latrobe, PA 15650

Vendor Contact: Dan Bolling
Product Assurance Manager
E-mail: dan@lsmachineco.com
Phone: 724-837-5500

Nuclear Industry Activity: L&S Machine Company, with facilities located in Latrobe, PA and Marion Center, PA, supplies complex, tight-tolerance machined parts for the commercial nuclear power industry.

Inspection Dates: March 20-23, 2017

Inspection Team Leader Jonathan Ortega-Luciano NRO/DCIP/QVIB-2

Inspectors: Ashley Ferguson NRO/DCIP/QVIB-3
Philip Natividad NRO/DCIP/QVIB-1
Raju Patel NRO/DCIP/QVIB-2

Approved by: John P. Burke, Chief
Quality Assurance Vendor Inspection Branch-2
Division of Construction Inspection
and Operational Programs
Office of New Reactors

EXECUTIVE SUMMARY

L&S Machine Company
99901476/2017-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a vendor inspection at the L&S Machine Company (hereafter referred to as L&S) facilities located in Latrobe, PA and Marion Center, PA, 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 L&S implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that met the NRC's regulatory requirements. The NRC inspection team conducted the inspection from March 20-23, 2017. This was the first inspection of L&S.

This technically-focused inspection specifically evaluated the fabrication and commercial-grade dedication activities for safety-related systems, structures, and components at L&S. Specifically, the inspection concentrated on L&S' controlling processes and activities relating to fabrication of safety-related fuel assembly components for Westinghouse Electric Company.

Some of the specific activities observed by the NRC inspection team included:

- Assembly of Weld Pad and Top Plate per welding procedure specification (WPS) LSM-WPS-027
- In-process inspection of a casting for the bottom nozzle
- First piece inspection of nozzle side plates
- L&S' weekly and daily corrective action and production coordination meetings

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 Inspection Procedure (IP) 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017, IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017, and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012.

With the exception of the notice of nonconformances described below, the NRC inspection team concluded that L&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 L&S' personnel are implementing these policies and procedures effectively. The results of this inspection are summarized below.

Corrective Action

The NRC inspection team issued Nonconformance 99901476/2017-201-01 in association with L&S' failure to implement the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVI, "Corrective Action" of Appendix B to 10 CFR Part 50. Nonconformance 99901476/2017-201-01 cites L&S for failing to establish measures for source evaluation and provide objective evidence of quality furnished by a supplier. In addition, Nonconformance 99901476/2017-201-01 cites L&S for failing to ensure that conditions adverse to quality are promptly identified and corrected. Specifically, L&S closed out corrective action report NC621 without completing the corrective actions to evaluate and qualify suppliers for designation on L&S' Approved Supplier List (ASL) in lieu of using Westinghouse Electric Company's (WEC's) Qualified Supplier List (QSL) as the basis for using suppliers. As a result, L&S issued a safety-related purchase order to Tooling Specialist Inc. (TSI) without verifying TSI's quality assurance program met the qualifications to perform safety-related services.

Oversight of Contracted Activities and Internal Audits

The NRC inspection team issued Nonconformance 99901476/2017-201-02 in association with L&S' failure to implement the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. Nonconformance 99901476/2017-201-02 cites L&S' for failing to ensure that internal audits were performed by personnel not having direct responsibilities in the areas being audited. Specifically, the NRC inspection team identified that for internal audits conducted between 2013 and 2016 at the Latrobe and Marion Center facilities, the Production Assurance Manager and the Director of Quality participated as a member of the audit team and audited areas for which they had direct responsibility.

Other Inspection Areas

The NRC inspection team determined that L&S is implementing its programs for Part 21, Commercial-Grade Dedication, Control of Measurement and Test Equipment, Nonconforming Material, Parts, or Components, and Control of Special Processes in accordance with the applicable regulatory requirements of 10 CFR Part 21 and Appendix B to 10 CFR Part 50 respectively. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team also determined that L&S is implementing its policies and procedures associated with these programs. No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed L&S Machine Company's (hereafter referred to as L&S) policies and implementing procedures that govern L&S' Title 10 of the *Code of Federal Regulations* (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 L&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 L&S' nonconformance and corrective action procedures provide a link to the 10 CFR Part 21 program.

The NRC inspection team also discussed the 10 CFR Part 21 program with L&S' management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that L&S 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 L&S is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

2. Oversight of Contracted Activities and Internal Audits

a. Inspection Scope

The NRC inspection team reviewed L&S' policies and implementing procedures that govern its oversight of contracted activities and internal audit program to verify compliance with the requirements of Criterion IV, "Procurement Document Control," Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50.

The inspectors reviewed L&S' process of selecting and approving suppliers and service providers for safety-related components. The inspector reviewed L&S' Approved Suppliers List (ASL) and selected a sample of suppliers to review L&S' methodology of conducting and documenting audits. The NRC inspection team verified that the audit reports contained objective evidence of the review of the relevant quality assurance (QA) criteria of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of POs to verify that the POs included, as appropriate: the scope of work, right of access to facilities, and extension of contractual requirements to subcontractors. In addition, the NRC inspection team confirmed that all safety-related POs reviewed included clauses invoking the provisions of 10 CFR Part 21.

The NRC inspection team reviewed a sample of internal audits and the qualifications of L&S' auditors to verify the implementation of the L&S audit program. The NRC inspection team verified that L&S had prepared and approved plans that identify the audit scope and applicable checklist criteria before the initiation of the audit activity. For audits that resulted in findings, the NRC inspection team verified that corrective actions were implemented to the correct issues identified.

The NRC inspection team also discussed the oversight of contracted activities and internal audits programs with L&S' management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

During the review of L&S' process for selecting and approving suppliers for qualification on their ASL, the NRC inspection team noted that L&S previously used qualification on Westinghouse Electric Company (WEC) Qualified Suppliers List (QSL) as the basis for using a sub-supplier. In a letter from WEC to L&S, dated March 30, 2015, WEC communicated that L&S would no longer be authorized to use WEC's QSL as the bases for using a sub-supplier effective immediately. As such, L&S was required to evaluate and qualify its safety-related suppliers in accordance with "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team, reviewed a sample of external audits performed by L&S of safety-related suppliers. In reviewing the qualification of Tooling Specialist Inc. (TSI), the NRC inspection team observed that the first audit of TSI conducted following WEC's notification prohibiting the use of WEC's QSL was performed on February 1, 2017. However, on October 19, 2015, L&S issued a safety-related PO to TSI to perform coordinate measuring machine (CMM) inspections prior to performing an audit to qualify TSI as an approved safety-related supplier. This issue is further discussed in Section 3 of this report.

During the review of the internal audits, the NRC inspection team identified that for the audits conducted at the Latrobe facility in 2013, 2015, and 2016 and the audits conducted at the Marion Center facility in 2014 and 2016 the L&S Production Assurance Manager and the Director of Quality lead or participated as a team member. The NRC inspection team noted that several sections of the QA program audit, specifically; Corrective Action, Inspection, Quality Assurance Program, Procurement Document Control, and Control of Purchased Items and Services, were performed by the Production Assurance Manager and Director of Quality who had direct responsibility of those areas. This issue is identified as Nonconformance 99901476/2017-201-02.

c. Conclusion

The NRC inspection team issued Nonconformance 99901476/2017-201-02 in association with L&S' failure to implement the regulatory requirements of Criterion XVIII of Appendix B to 10 CFR Part 50. Nonconformance 99901476/2017-201-02 cites L&S' for failing to ensure that internal audits were performed by personnel not having direct

responsibilities in the areas being audited. Specifically, the NRC inspection team identified that for internal audits conducted between 2013 and 2016 at the Latrobe and Marion Center facilities, the Production Assurance Manager and Director of Quality participated as a member of the audit team and audited areas for which they had direct responsibility.

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

a. Inspection Scope

The NRC inspection team reviewed L&S' policies and implementing procedures that govern the control of nonconformances and corrective action to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50 respectively.

The NRC inspection team reviewed L&S' nonconformance report (NCR) log and reviewed a sample of NCRs to ensure that L&S implemented an adequate program to assess and control of nonconforming items, including appropriate identification, documentation, segregation, evaluation and disposition. Additionally, the NRC inspection team interviewed L&S' personnel and verified that there were designated areas to segregate and control nonconforming materials.

In addition, the NRC inspection team selected a sample of corrective actions reports (CAR) to verify that conditions adverse to quality (CAQ) were being promptly identified and corrected and for a significant condition adverse to quality (SCAQ) that measures were taken to preclude repetition. Finally, the NRC inspection team verified that the L&S' nonconformance and corrective action processes provided a link to the 10 CFR Part 21 program.

The NRC inspection team also discussed the nonconformance and corrective action programs with L&S' management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

The NRC inspection team reviewed CAR NC621, dated June 18, 2013, issued in response to WEC's audit WES-2013-065. WEC issued a supplier corrective action request (SCAR) requesting L&S to develop a plan for identifying and auditing their own suppliers prior to be added to the L&S ASL in transition from utilizing WEC's QSL as the bases for qualifying suppliers. The corrective actions were to develop a plan to: 1) identify suppliers requiring an audit or survey, 2) develop a schedule to conduct the audits and surveys, and 3) complete the audits/surveys by March 2015.

WEC approved the plan presented by L&S, which included follow-up actions for CAR NC621 to evaluate and qualify its safety-related and commercial suppliers and develop an ASL in accordance with L&S QA Program as approved by WEC. The follow-up action of finalizing the ASL was denoted as complete on October 1, 2015, and CAR NC621 was closed out on October 16, 2015. The NRC inspection team noted that L&S closed CAR NC61 without performing the required evaluation of all suppliers prior to their designation as an approved supplier in accordance with LSM_QAM_001, "Quality Assurance Manual." During the review of the ASL the NRC inspection team found that

L&S issued a safety-related PO to TSI on October 19, 2015, to perform inspections using a coordinate measuring machine (CMM) without verifying TSI's qualifications to perform the safety-related services being procured. TSI was on L&S' ASL as a safety-related supplier, however, an audit of TSI was not conducted until February 1, 2017. As a result of L&S' inadequate corrective actions to evaluate and qualify its suppliers, L&S issued a safety-related PO to TSI without verifying TSI's qualifications to perform a safety-related service. This issue is identified as Nonconformance 99901476/2017-201-01.

c. Conclusion

The NRC inspection team issued Nonconformance 99901476/2017-201-01 in association with L&S' failure to implement the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVI, "Corrective Action" of Appendix B to 10 CFR Part 50. Nonconformance 99901476/2017-201-01 cites L&S for failing to establish measures for source evaluation and provide objective evidence of quality furnished by a supplier. In addition, Nonconformance 99901476/2017-201-01 cites L&S for failing to ensure that conditions adverse to quality are promptly identified and corrected. Specifically, L&S closed out corrective action report NC621 without completing the corrective actions to evaluate and qualify suppliers for designation on L&S' ASL in lieu of using WEC's QSL as the basis for using suppliers. As a result, L&S issued a safety-related purchase order to Tooling Specialist Inc. (TSI) without verifying TSI's quality assurance program met the qualifications to perform safety-related services.

The NRC inspection team concluded that L&S' is implementing its nonconforming materials, parts, or components program in accordance with the regulatory requirements of Criterion XV of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that L&S' is implementing its policies and procedures associated with the control of nonconforming materials, parts, or components. No findings of significance were identified.

4. Commercial-Grade Dedication

a. Inspection Scope

The NRC inspection team reviewed L&S' policies and implementing procedures that govern the dedication of commercial-grade items for use in safety-related applications to verify compliance with the applicable regulatory requirements of 10 CFR Part 21, Criterion III, and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed a sample of commercial-grade dedication plans, checklists, reports, associated POs, and commercial-grade surveys of several commercial vendors on L&S' ASL. The NRC inspection team evaluated the criteria for the selection of critical characteristics and the selection and acceptance methods to verify effective implementation of L&S' dedication process.

The NRC inspection team also discussed the commercial-grade dedication program with L&S' management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that L&S is implementing its commercial-grade dedication program in accordance with the regulatory requirements of 10 CFR Part 21, 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 L&S is implementing its policies and procedures associated with the commercial-grade dedication program. No findings of significance were identified.

5. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed L&S' policies and implementing procedures that govern the Measuring and Test Equipment (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 verified that the M&TE used was clearly labeled with the calibration date, calibration due date, and individual who performed calibration. In addition, the NRC inspection team reviewed the L&S' database used for tracking calibration status, completion, and due dates of all their M&TE. The NRC inspection team verified that the calibration records indicated the as-found and as-left conditions; accuracy required, calibration results, calibration dates, and the due date for recalibration.

In addition, the NRC inspection team discussed with L&S staff, the control and disposition of defective M&TE to verify that L&S adequately controlled defective M&TE through identification and segregation. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that L&S 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 L&S is implementing its policies and procedures associated with the M&TE program. No findings of significance were identified.

6. Control of Special Processes

a. Inspection Scope

The NRC inspection team reviewed L&S' policies and implementing procedures that govern the control of special processes to verify compliance with the requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50, and Section IX, "Welding and Brazing Qualification," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code.

Specifically, the NRC inspection team reviewed the welding procedure and associated procedure qualification record (PQR) to verify the procedure used was qualified in accordance with ASME Section IX Code requirements. The NRC inspection team reviewed the welder performance qualification records for the welder performing the weld. The NRC inspection team verified the welder was qualified for the welding technique, material used and the weld position and the welder maintained continuity of qualifications in accordance with Section IX of the ASME Code requirements.

The NRC inspection team performed a walk-down of the weld storage area to verify control of weld materials to prevent degradation, inadvertent use, or loss of traceability in accordance with L&S approved procedures. Also, the NRC inspection team reviewed certified material test reports for the weld filler metal used to verify that the material specifications for physical and chemical properties meet the ASME Section II Code requirements. Further, the NRC inspection team verified the weld machines were calibrated and the calibration frequency maintained.

The NRC inspection team also discussed the control of special process program with L&S' management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that L&S is implementing its special processes programs 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 inspectors also determined that L&S is implementing its policies and procedures associated with the control of special processes program. No findings of significance were identified.

7. Entrance and Exit Meetings

On March 20, 2017, the NRC inspection team discussed the scope of the inspection with Rob Dinardi, President of L&S, Dan Bolling, and other members of L&S' management and technical staff. On March 23, 2017, the NRC inspection team presented the inspection results and observations during an exit meeting with Rob Dinardi, Dan Bolling, and other members of L&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
Jonathan Ortega-Luciano	Inspection Team Leader	NRC	X	X	
Andrea Ferguson	Inspector	NRC	X	X	
Philip Natividad	Inspector	NRC	X	X	
Raju Patel ¹	Inspector	NRC	X	X	
John Burke	Chief	NRC		X	
Dan Bolling	Product Assurance Manager	L&S	X	X	X
Dave Cook	Inspection Supervisor	L&S		X	
Dave Smathers	General Manager	L&S	X	X	
Jason Smathers	Manufacturing Manager	L&S	X	X	X
Jayme Schick	Machinist	L&S			X
John Sokol	Supervisor-Marion Center	L&S			X
Josh Campbell	Supervisor	L&S			X
Lauren Morlacci	Manufacturing System Engineer	L&S	X	X	X
Pam Woodside	IT Analyst	L&S	X	X	
Rob Dinardi	President	L&S	X	X	
Robert Frayvor	Supervisor	L&S			X
Robert Jones	Supervisor	L&S			X
Sam Ferri	Supervisor	L&S			X
Samantha Smathers	Level II Inspector	L&S			X
Tammy Smathers	Administrative Assistant	L&S			X

¹ Participated Remotely from NRC Headquarters Office

2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012.

IP 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017.

IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017.

3. LIST OF ITEMS OPENED

Item Number	Status	Type	Description
99901476/2017-201-01	Open	NON	Criterion XVIII & Criterion XVI
99901476/2017-201-02	Open	NON	Criterion XVIII

4. DOCUMENTS REVIEWED

Policies and Procedures

- L&S_QAM_001, "Quality Assurance Manual," Revision 10, dated October 5, 2016
- General Operating Procedure (GOP) - 4.500, "Dedication Of Commercial Grade Items & Services," Revision 2 dated July 31, 2012
- GOP - 2.0, "Quality Assurance Program," Revision 0, dated August 20, 2015
- GOP - 4.600, "Commercial Grade Survey," Revision 1 dated July 31, 2012
- GOP - 6.0, "Document Control," Revision 0, dated October 8, 2015
- GOP - 7.0, "Control of Purchased items and Services," Revision 1 dated November 22, 2016
- GOP 8.300, "Reporting of Defects & Noncompliance in Accordance With 10 CFR Part 21", Revision 7, dated July 31, 2013
- GOP - 9.0, "Special Processes," Revision 0, dated May 10, 2016
- GOP - 9.200, " Storage and Control of Dated Materials," Revision 5 dated June 9, 2012
- GOP - 9.300, " Material Handling, Storage, and Shipping," Revision 7 dated November 5, 2012
- GOP - 10.0, "Inspection," Revision 0, dated May 11, 2016
- GOP - 12.0, "Control of M&TE," Revision 1, dated November 22, 2016
- GOP 15.2, "Reporting of Defects & Noncompliance in Accordance With Regulatory and Customer Requirements", Revision 0, dated April 5, 2016
- GOP 16.0, "Corrective and Preventive Action", Revision 0, dated March 21, 2016
- L&S_QAM_001, "Quality Assurance Manual", Revision 10, dated October 5, 2016
- GOP - 17.0, "Quality Assurance Records," Revision 0, dated May 25, 2016

Calibration and Inspection Reports

- L&S Weld Machine S/N 14102006, 141020007, and 141020008 Calibration Record dated March 17, 2017
- In-process Inspection Report for L&S PO # S170006 CN1, dated March 15, 2017
- Inspection Plan for Drawing 1008E14, "17x17 Bottom Nozzle Skirted Debris Filter" Revision 8
- Receipt Inspection for Tooling Specialist Inc. PO S17006 CN1 , dated March 15, 2017
- Calibration Specification C035, Inspection Tool 130350005, dated August 12, 2016
- Calibration Specification C035, Inspection Tool 130350005, dated May 26, 2015
- Calibration Specification C035, Inspection Tool 130350005, dated May 28, 2014
- Calibration Specification C016, Inspection Tool 130160040, dated October 26, 2015
- Calibration Specification C016, Inspection Tool 130160040, dated September 29, 2014
- Certificate of Calibration (CoC) 0011014750 from Exelon power Labs dated March 1, 2017
- CoC 0011017663 from Exelon Power Labs, dated March 6, 2017
- CoC 0011006685 from Exelon Power Labs dated January 26, 2017
- CoC 10010967401 from Exelon Power Labs dated July 20, 2016
- CoC 0010982183 from Exelon Power Labs dated September 7, 2016
- CoC 0010984852 from Exelon Power Labs dated September 22, 2016
- CoC 0010987991 from Exelon Power Labs dated October 14, 2016
- CoC 0010903974 from Exelon Power Labs dated August 4, 2015
- CoC 0010909600 from Exelon Power Labs dated August 14, 2015
- CoC 0010909850 from Exelon Power Labs dated September 4, 2015
- CoC 0010842857 from Exelon Power Labs dated September 17, 2014
- CoC 001849713 from Exelon Power Labs dated October 29, 2014
- Out of Tolerance Report 17-005, Gage ID 130060010, dated March 16, 2017

Purchase Orders and Audit Reports

- Purchase Order (PO) No. 5500003110, from Westinghouse Electric Company to L&S Machine Company LLC., Change Notice 6, dated November 3, 2016
- PO No. K4433, from L&S to Industrial Testing Laboratory, dated February 4, 2010
- PO No. K4594 from L&S Machine to Marstrand Industries for Waterjet and Forming Services, Revision 1 dated May 28, 2015
- PO No. 4500402277 for fabrication - Top & Bottom Nozzles, Top Nozzles Springs, Spring Clamps, and Spiders dated July 29, 2011
- PO K4591 to Exelon Power Labs dated August 28, 2014
- PO K4590 to Tooling Specialist Inc. dated August 6, 2014
- PO K4606 to Tooling Specialist Inc. dated October 19, 2015
- PO S17006 CN1 to Tooling Specialist Inc. dated February 21, 2017
- PO S17003 CN3 to Tooling Specialist Inc. dated February 15, 2017
- Tooling Specialist In. Supplier Detail dated February 20, 2017
- Exelon Power Labs LLC-Plattsburg Supplier Detail dated March 31, 2016
- Exelon Power Labs LLC-Madison Supplier Details dated March 31, 2016
- WEC 2015-112-R, "3rd Party NIAC Audit of L&S Machine Co." Revision 0 dated June 12, 2015
- WES-2016-046, "L&S Machine Co. Supplier Quality Program Audit Report," dated June 6-9, 2016

- LSM-1, "Organization and QA Program (Requirements 1&2 of NQA-1) Audit Report and Checklist," dated July 17, 2013\
- LSM-1A-16-2, "L&S Machine Internal Audit-Latrobe and Checklist," dated April 13-19, 2016
- LSM-1A-16-4, "L&S Machine Internal Audit- Latrobe Internal Audits/CGD/Audits/Procurement and Checklist," dated October 18, 2016
- LSM-1A-16-5, "L&S Machine Internal Audit 2016-Marion Center and Checklist," dated December 7, 2016
- LSM-1A-16-7, "Limited Scope -2015 Gap Analysis, 10 CFR 50 AppB/10 CFR Part 21 Audit Report and Checklist," dated October 5-11, 2016
- LSM-5, "Requirement 4 Procurement Document Control (NQA-1) Audit Report and Checklist," dated August 14, 2013
- LSM-20, "Manufacturing-Main Audit Report and Checklist," dated August 26-27, 2015
- LSM-21, "Inspection Audit Report and Checklist," dated July 8-15, 2014
- LSM-EA-15-3, "Exelon Power Labs LLC-Madison Audit Report and Checklist," dated March 28-April 1, 2016
- LMS-EA-15-4, "Exelon Power Labs LLC-Plattsburg Audit Report and Checklist," dated March 28-April 1, 2016
- LSM –EA-17-1, "Tooling Specialist 2016 Audit LSM-EA-17-1 and Checklist," dated February 1-2, 2017

Nonconformance Reports

LSM-NC-14-37, LSM-NC-15-742, LSM-NC-16-19, LSM-NC-16-291, LSM-NC-16-292, LSM-NC-17-231, LSM-NC-17-244, LSM-NC-17-245, LSM-NC-17-246, LSM-NC-17-250, LSM-NC-17-251, LSM-NC-17-252, LSM-NC-17-253, LSM-NC-17-254, LSM-NC-17-255

Corrective Action Request

LSM-1A-16-1, TSI-04-15, NC621, LSM-EA-17-1, LSM-1A-16-1, LSM-CAR-14-9, LSM-CAR-14-22, LSM-CAR-15-11, LSM-CAR-15-38, LSM-CAR-16-18, LSM-CAR-16-21, LSM-CAR-16-25, LSM-CAR-16-29, LSM-CAR-16-31, LSM-CAR-16-32, LSM-CAR-16-46

Corrective Action Request Opened During the NRC Inspection

LSM-CAR-17-4, LSM-CAR-17-6, LSM-CAR-17-7, LSM-CAR-17-8, LSM-CAR-17-9, LSM-CAR-17-10, LSM-CAR-17-11, LSM-CAR-17-12, LSM-CAR-17-13

Training Records

- L&S Welder Qualification Record (WQR) No. LSM-PQR-027, Revision 01 dated March 23, 2010, for Keith Mull qualified in Gas tungsten arc welding (GTAW) and Shielded metal arc welding (SMAW) for P8-P8 material, and in 1G position
- L&S Welder Qualification Record (WQR) No. LSM-PQR-027, Revision 0 dated June 23, 2005, for Mike Ridilla qualified in GTAW and SMAW processes for P8-P8 material and in 1G position
- L&S Welder Qualification Record (WQR) No. LSM-PQR-027, Revision 02 dated August 4, 2016, for Josh Kemerer qualified in GTAW and SMAW processes for P8-P8 material and in 1G position
- L&S Inspector Qualification and Certification for Samantha Smathers

- Lead Auditor Qualification Record for Dan Boiling dated September 20, 2003
- Lead Auditor Qualification Record for Russell Lion dated June 1, 2013
- Lead Auditor Qualification Record for Stan Rudge dated June 24, 2014

Miscellaneous

- CDI-1000-1, "Commercial Dedication Instruction for Calibration of Surface Plates: Platco," Revision 1 dated September 24, 2015
- CDI-1001-1, "Commercial Dedication Instruction for Calibration of Video Comparator: Inspection Engineering," Revision 0 dated January 5, 2016
- CDI-1002-1, "Commercial Dedication instruction for material Testing," Revision 0 dated May 25, 2016
- CDI-V6-401, "Commercial Dedication of Marstrand water jet cutting & forming of enclosures," Revision 2 dated June 12, 2013
- Commercial grade Survey No. 100912 for Marstrand dated October 9, 2012
- L&S Annual Visual Acuity Record dated April 7, 2016, for Keith Mull, Mike Ridilla, and Josh Kemerer, performed to Jaeger J-1 chart
- L&S Form 9.0.1, "Material Control Ticket Form," Revision 0, dated May 11, 2016, issued for Westinghouse Electric Corporation supplied 5/32" diameter x 14" long E308/308L AWS 5.4 weld electrodes traceable heat no. 15H14E, on receiving lot No. 40-2999, received on August 3, 2016
- L&S Procedure Qualification Record (PQR) LSM-PQR-027, Revision 2, dated August 12, 2014, for GTAW and SMAW manual welding processes
- L&S Weld Wire Log PA_043, last updated December 20, 2016
- LS Work Order No: 14846-1 for Sub Assembly Top Plate and Pad, Revision 11
- LSM-PQR-027, Revision 0, dated March 26, 2004, for GTAW and SMAW manual welding processes
- LSM-PQR-027, Revision 01, dated January 29, 2010, for GTAW and SMAW manual welding processes
- QI-0055, "Sampling Requirements for Dimensional Inspections," Revision 2 dated February 17, 2015
- Scheduling Agreement number 5500003381 from Westinghouse to L&S Machine Co. LLC. for Spring Top Nozzle Parts, dated January 20, 2017
- Scheduling Agreement number 5500003386 from Westinghouse to L&S Machine Co. LLC. For Bottom Nozzle, dated January 23, 2017
- WEC Document No. SS-0001525, Revision 0, dated August 25, 2014, for approval of L&S-PQR-027, Revision 02, dated August 12, 2014
- Welding Procedure Specifications (WPS) LSM-WPS-027, Revision 2, dated August 12, 2014
- WPS No. LSM-WPS-028, Revision 2, dated August 12, 2014
- QLA_QLA_00120, "Letter from WEC to all WEC Suppliers," dated March 30, 2015
- LSM-LTR-16-07, "Review of L&S M&TE Calibration Certificates Performed by Exelon Power Labs from July 2015 to July 2016," dated August 23, 2016