

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 1 1 3 1 OF 0 4										PAGE (3) 1 OF 0 4																															
TITLE (4) Nuts Received And Issued As ASME Category II Without Proper Documentation Of Charpy Impact Testing Due To A Manufacturing Deficiency And A Personnel Error																																																			
EVENT DATE (5)						LER NUMBER (6)						REPORT DATE (7)						OTHER FACILITIES INVOLVED (8)																																	
MONTH		DAY		YEAR		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER		MONTH		DAY		YEAR		FACILITY NAMES																																	
																		Catawba, Unit 2																																	
0 1		2 6		8 8		8 8		0 1		1 1		0 0		0 3		1 1				0 5 0 0 0 4 1 1 4																															
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OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																																																	
1		20.402(b)										20.405(e)										50.73(a)(2)(iv)										73.71(c)																			
POWER LEVEL (10)		1 0 0										20.405(a)(1)(i)										50.38(e)(1)										50.73(a)(2)(v)										73.71(e)									
												20.405(a)(1)(ii)										50.48(e)(2)										50.73(a)(2)(vi)										X OTHER (Specify in Abstract below and in Text, NRC Form 365A)									
												20.405(a)(1)(iii)										50.73(a)(2)(ii)										50.73(a)(2)(vii)(A)																			
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LICENSEE CONTACT FOR THIS LER (12)																																																			
NAME										TELEPHONE NUMBER																																									
Julio G. Torre, Associate Engineer - Licensing										710 14 317 13 1-18 10 12 19																																									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																			
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPDOS		CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPDOS																																	
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)																																									
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO																																									
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																																			

During early January 1988, Duke Power Company Design Engineering personnel, performing fastener testing per NRC Bulletin No. 87-02, discovered that nuts delivered to Catawba Nuclear Station on May 27, 1987 which were purchased from Nova Machine Products Corporation did not have proper documentation of Charpy impact testing. The situation was researched by QA personnel, who discovered that the fifty nuts in question had not been Charpy impact tested and were not produced under an approved quality assurance program as required. On January 26, 1988, General Office QA personnel issued a Vendor Surveillance Deficiency Report against Nova Machine Products Corporation. At the time of discovery, Unit 1 was in Mode 1, Power Operation, and Unit 2 was in No Mode, defueled.

This incident has been attributed to a manufacturing deficiency. Additionally, the General Office QA personnel, who approved the Vendor certification records, failed to recognize that the nuts had not been Charpy impact tested. Station Mechanical Maintenance personnel reviewed the application of all issued subject nuts and discovered that none had been used in a safety-related application. Station Materials personnel discarded the remainder of the subject nuts. This incident has been reviewed with the involved General Office QA personnel. The health and safety of the public were unaffected by this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Catawba Nuclear Station, Unit 1	0500041388	—	011	—	00	02	OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

BACKGROUND:

ASME Code Section III, Subsection NC specifies the requirements for Class II components (Duke class B). Article CN-2311 of that subsection specifies the material for which impact testing is required and specifies bolting, including studs, nuts, and bolts with nominal size greater than one inch shall be impact tested. Duke Specification DPS-1206.00-02-0004 Rev. 0, Specification for the Procurement of QA Condition 1 Bolts, Studs, and Nuts, specifies that all bolting materials (purchased under this specification) shall be impact tested when so required by the Code on the purchase order.

ASME Code Section III, Subsection NCA, Article NCA 3800 specifies the implementation of an approved quality assurance program at the mill where Class II components are produced.

DESCRIPTION OF INCIDENT:

On April 2, 1987, Purchase Order N19270-79 was issued to Nova Machine Products Corporation for fifty 1 1/4-inch heavy hex nuts to be supplied to Catawba Nuclear Station. The nuts were to be made of SA194 Grade 2H carbon steel Duke class B in accordance with Duke specification DPS-1206.00-02-0004 Rev. 0. On May 19, 1987, Nova Machine Products Corporation personnel telephoned Duke Power Quality Assurance (QA) personnel to release the material for shipment. The QA personnel questioned the Nova personnel about the fabrication process for the nuts. Nova personnel confirmed that the nuts were manufactured in accordance with Duke Specification DPS-1206.00-02-0004 Rev. 0 and met the requirements for Duke class B material.

On May 27, 1987, the nuts arrived at Catawba Nuclear Station. On June 2, 1987, General Office QA personnel approved the Vendor certification records which did not indicate that Charpy impact testing had been performed for the nuts. Thirty-six of the fifty nuts were issued from stock for nine work requests during the remainder of 1987.

During January 1988, Design Engineering personnel were performing testing of various nuts as a result of NRC Bulletin No. 87-02. During this testing, Design Engineering personnel discovered that the nuts supplied on Purchase Order N-19270-79 were not documented as being Charpy impact tested. Design Engineering notified QA Vendors personnel that the nuts were possibly not properly tested.

QA Vendors personnel researched the situation and discovered that the nuts were not Charpy impact tested and were not produced under an approved quality assurance program as required. Based upon this discovery, Vendor Surveillance Deficiency Report No. S-0034 was issued against Nova Machine Products Corporation on January 26, 1988.

On February 4, 1988, QA station personnel originated Duke Power Problem Investigation Report (PIR) No. Q-C88-0050 documenting the situation. In response to the PIR, the remainder of the nuts were put on QA Hold and then later discarded.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CONCLUSION:

This incident has been attributed to a manufacturing deficiency. The subject nuts were manufactured by Daniel Bolt and Nut of Houston, Texas and were not produced under an approved quality assurance program as was required. The nuts were purchased by Nova Machine Products in mid 1985 from Precision Nuclear Products of Austin, Texas after Precision Nuclear Products went out of business.

Contact with Nova Machine personnel further disclosed that the order was not processed as an ASME related order. The purchase order clearly stated that the nuts were to be manufactured in accordance with Duke specification DPS-1206.00-02-0004, Rev. 0 and were to meet the requirements of Duke class B. Nova Machine personnel indicated that their personnel overlooked that the order was safety related. However, the Supplier Quality Assurance Certification (completed and signed by Nova Machine personnel) states the material conforms to the requirements of the referenced Duke Power documents (DPS-1206.00-02-0004, Rev. 0) including all codes, standards, test requirements, and Quality Assurance requirements invoked therein.

This incident is also attributed to a personnel error. The General Office QA individual who approved the vendor certification records for the subject nuts failed to recognize that the Charpy impact test had not been performed as required. Additionally, the individual failed to determine that the nuts were manufactured by Daniel Bolt and Nut which did not have an approved quality assurance program. If these factors had been determined, the material would not have been accepted for use on-site.

In response to the PIR, Materials personnel on-site placed the remainder of the nuts on QA Hold and then later discarded them. Mechanical Maintenance personnel researched each work request on which the nuts were issued to identify their location. The subject nuts were tested by Design Engineering per NRC Bulletin No. 87-02. The test results prove this fastener to meet the material properties of SA194 Grade 2H. The subject nuts were not used in any safety-related applications and therefore were not required to be removed. In addition, Nova Machine Products Corporation has been removed from the Duke Power Company Approved Vendor List as of March 1, 1988.

A review of previous Incident Investigation Reports was conducted and revealed no previous similar incidents at Catawba Nuclear Station.

CORRECTIVE ACTION:SUBSEQUENT

- (1) Vendor Surveillance Deficiency Report No. S-0034 was issued.
- (2) Materials personnel discarded all unused material.
- (3) Mechanical Maintenance identified location of all issued material.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

- (4) Nova Machine Products Corporation was removed from Duke Power Company Approved Vendor List.
- (5) This incident was reviewed with the involved QA individual.

SAFETY ANALYSIS:

A review was conducted of all work requests to which these nuts were issued. The results showed that in seven of the nine applications, the nuts were used for tooling such as alignment bars, jigs, and lifting devices. In one of the other two applications, one nut was used for replacement of a bonnet stud nut on 1CF-017, Main Feedwater Pump 1B Discharge Isolation valve. This valve is Duke class G, non-safety related. In the final application, review of the work request and conversation with responsible personnel did not identify the use of the two nuts. However, the work performed under this work request involved repairing a leaking 6-inch flange on the Moisture Separator Reheater Drain (HS) System. This non-safety related flange requires 3/4-inch nuts, and therefore, the two 1 1/4-inch nuts are believed to have been used for an alignment device.

Since all issued nuts were used in non-safety related applications and Design Engineering testing has verified the proper material properties of the nuts, plant safety was not compromised.

This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(vi).

The health and safety of the public were unaffected by this incident.

DUKE POWER COMPANY

P.O. BOX 33189

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VICE PRESIDENT
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March 11, 1988

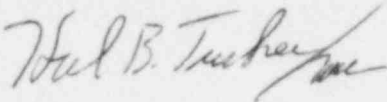
Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
LER 413/88-11

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/88-11 concerning nuts which were received and issued as ASME Category II without proper documentation of Charpy Impact testing. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

JGT/10002/sbn

Attachment

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NRC Resident Inspector
Catawba Nuclear Station

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