

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

October 11, 1989

NRC INFORMATION NOTICE NO. 89-70: POSSIBLE INDICATIONS OF MISREPRESENTED
VENDOR PRODUCTS

Addressees:

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose:

This information notice is intended to alert addressees to possible indications of misrepresented vendor products and to provide information related to detection of such products. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. Suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

The NRC is concerned about what appears to be an increased number of instances of misrepresented vendor products being supplied to the nuclear industry. Equipment procured as new is assumed to meet all procurement documentation requirements, applicable plant design requirements, and original manufacturer's specifications. However, on many occasions such equipment has not conformed to these requirements and specifications. The NRC has published numerous bulletins and information notices regarding specific instances of misrepresented products in the last two years. These are listed for reference in Attachment 1.

Detecting misrepresented products is difficult because most quality assurance programs are not designed for detecting counterfeit or fraudulent practices. The criteria used to confirm the quality of products during receipt inspection and testing generally have assumed vendor integrity and are not focused on identifying an intent to deceive. This information notice summarizes possible indications of counterfeit or fraudulent material that have been discovered by licensees during inspection and testing and by the NRC staff during inspections, along with information provided by concerned vendors. The NRC staff believes this information will be helpful to licensees in detecting misrepresented vendor products.

Attachment 2 lists some common characteristics of misrepresented products.

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General indications may be found early in the procurement process, beginning with the price quote and scheduled delivery time requirements. Some things that have been found to be present when misrepresented products were identified and which can be found during the quoting process are:

- (1) the name of the vendor - several instances of apparent counterfeit and fraud involved vendors who were not authorized distributors for the products they supplied,
- (2) the price - quoting of prices by the vendor that are significantly lower than those of the competition,
- (3) delivery schedule - a shorter delivery time than that of the competition, and
- (4) the source of the item - drop shipment of items has been noted in several cases of misrepresentation where the quoted supplier subcontracted the order to another company and then had the subcontractor ship the product directly to the purchaser. The quoted supplier never saw or verified the quality of the product which, in some cases, has been substandard.

The receipt inspection and review process is a key element and important step in detecting misrepresented products. Some easy items to check that are often overlooked are the names and indications of routing on the shipping container and the overall appearance of the products. Some distributors have been bold enough to ship supposedly new equipment with one vendor's name on it in a container marked with another vendor's name. Another important check is to note whether the items in each shipment are uniform and similar in appearance.

Some deviations may occur even in authentic items; however, differences can signal a problem and indicate the need for additional review. Some distributors or suppliers mix misrepresented vendor products with authentic vendor components. This type of misrepresentation has required close inspection to detect the differences.

One of the most common indications of misrepresented components, which can be discovered during receipt inspection, is evidence that the component is not new but has been used and refurbished. There have been many recent instances of licensees buying what they thought were new components only to discover that they actually were given refurbished components that in some cases did not meet their procurement requirements. Evidence of prior usage includes scratches that indicate that the component has been taken apart, new paint that shows evidence of another color underneath or attempted exterior repair, and, for metallic components, pitting or corrosion.

Evidence of repair, especially when parts from another manufacturer are used, is also an indication that the component has been used. Knowledge of components, even of simple things such as color or distinctive markings, has led to the discovery of refurbished items. Recent experience with misrepresented circuit breakers, for example, has shown that close-checking of tags and labels can identify misrepresented equipment.

In an attempt to market refurbished circuit breakers as new, some vendors have been making counterfeit tags and labels from copies of authentic ones and attaching them to the breakers. Such a practice can be detected when the equipment is examined to see, for example, if the labels are in the wrong location or appear different, or if the tags were attached with screws rather than rivets. Another related indication to be aware of is the use by some vendors of counterfeit Underwriters Laboratory (UL) labels on electrical products.

There is no substitute for doing appropriate measuring and testing during receipt inspection. An accurate check of dimensions is often essential in determining if a part is acceptable, regardless of whether or not it is misrepresented. Testing to determine the material composition of a product can also be important, as was discovered during a recent instance of misrepresented fasteners.

It is recognized that testing is not always practical. Thorough programmatic and implementation audits of the vendors quality assurance programs are, in many cases, necessary to establish and confirm the basis for accepting the vendor products.

Licensees may wish to also consider ongoing industry efforts in this area in taking actions to avoid problems related to misrepresented vendor products.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact one of the technical contacts below or the appropriate NRR project manager.



Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contacts: H. M. Wescott, NRR
(301) 492-3216

S. L. Magruder, NRR
(301) 492-0985

Attachments:

1. List of Recently Issued NRC Bulletins and Information Notices Regarding Misrepresented Material
2. Common Characteristics of Misrepresented Vendor Products
3. List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED NRC BULLETINS AND INFORMATION NOTICES
REGARDING MISREPRESENTED MATERIAL

1. NRC Compliance Bulletin No. 87-02 and Supplements 1 and 2: "Fastener Testing to Determine Conformance With Applicable Material Specifications."
2. NRC Bulletin No. 88-05 and Supplements 1 and 2: "Nonconforming Materials Supplied by Piping Supplies, Inc. at Folsom, New Jersey and West Jersey Manufacturing Company at Williamstown, New Jersey."
3. NRC Bulletin No. 88-10 and Supplement 1: "Nonconforming Molded-Case Circuit Breakers."
4. NRC Information Notice No. 88-19: "Questionable Certification of Class 1E Components."
5. NRC Information Notice No. 88-35: "Inadequate Licensee Performed Vendor Audits."
6. NRC Information Notice No. 88-46 and Supplements 1, 2 and 3: "Licensee Report of Defective Refurbished Circuit Breakers."
7. NRC Information Notice No. 88-48 and Supplements 1 and 2: "Licensee Report of Defective Refurbished Valves."
8. NRC Information Notice No. 88-97 and Supplement 1: "Potentially Substandard Valve Replacement Parts."
9. NRC Information Notice No. 89-18: "Criminal Prosecution of Wrongdoing Committed by Suppliers of Nuclear Products or Services."
10. NRC Information Notice No. 89-22: "Questionable Certification of Fasteners."
11. NRC Information Notice No. 89-39: "List of Parties Excluded From Federal Procurement or Nonprocurement Programs."
12. NRC Information Notice No. 89-45 and Supplement 1: "Metalclad, Low-Voltage Power Circuit Breakers Refurbished With Substandard Parts."
13. NRC Information Notice No. 89-56: "Questionable Certification of Material Supplied to the Defense Department by Nuclear Suppliers."
14. NRC Information Notice No. 89-59: "Suppliers of Potentially Misrepresented Fasteners."

COMMON CHARACTERISTICS OF MISREPRESENTED VENDOR PRODUCTS

- nonfactory-authorized distributor
- price significantly less than that of competition
- delivery in significantly shorter time than that of competition
- differences in appearance of items in the same shipment
- unusual box and packing of component
- wear marks or scratches on painted surfaces
- pitting or corrosion of metallic components
- exterior evidence of attempted repairs
- missing name plate or new name plate on old component
- unusual location or method of attachment of identification (ID) tag
- missing part number or irregular stamping on ID tag
- improper dimensions
- ground-off casting marks with other markings stamped in the area

LIST OF RECENTLY ISSUED
 NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
89-69	Loss of Thermal Margin Caused by Channel Box Bow	9/29/89	All holders of OLs or CPs for BWRs.
89-68	Evaluation of Instrument Setpoints During Modifications	9/25/89	All holders of OLs or CPs for nuclear power reactors.
89-67	Loss of Residual Heat Removal Caused by Accumulator Nitrogen Injection	9/13/89	All holders of OLs or CPs for PWRs.
89-66	Qualification Life of Solenoid Valves	9/11/89	All holders of OLs or CPs for nuclear power reactors.
88-46, Supp. 4	Licensee Report of Defective Refurbished Circuit Breakers	9/11/89	All holders of OLs or CPs for nuclear power reactors.
89-65	Potential for Stress Corrosion Cracking in Steam Generator Tube Plugs Supplied by Babcock and Wilcox	9/8/89	All holders of OLs or CPs for PWRs.
89-64	Electrical Bus Bar Failures	9/7/89	All holders of OLs or CPs for nuclear power reactors.
89-63	Possible Submergence of Electrical Circuits Located Above the Flood Level Because of Water Intrusion and Lack of Drainage	9/5/89	All holders of OLs or CPs for nuclear power reactors.
89-62	Malfunction of Borg-Warner Pressure Seal Bonnet Check Valves Caused By Vertical Misalignment of Disk	8/31/89	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
 CP = Construction Permit

In an attempt to market refurbished circuit breakers as new, some vendors have been making counterfeit tags and labels from copies of authentic ones and attaching them to the breakers. Such a practice can be detected when the equipment is examined to see, for example, if the labels are in the wrong location or appear different, or if the tags were attached with screws rather than rivets. Another related indication to be aware of is the use by some vendors of counterfeit Underwriters Laboratory (UL) labels on electrical products.

There is no substitute for doing appropriate measuring and testing during receipt inspection. An accurate check of dimensions is often essential in determining if a part is acceptable, regardless of whether or not it is misrepresented. Testing to determine the material composition of a product can also be important, as was discovered during a recent instance of misrepresented fasteners.

It is recognized that testing is not always practical. Thorough programmatic and implementation audits of the vendors quality assurance programs are, in many cases, necessary to establish and confirm the basis for accepting the vendor products.

Licensees may wish to also consider ongoing industry efforts in this area in taking actions to avoid problems related to misrepresented vendor products.

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*Previously concurred

VIB:DRIS	VIB:DRIS	C:VIB:DRIS	C:OGCB:NRR	Tech Editor	D:DRIS:NRR	DOEA
HWescott*	GCwalina*	EWBrach*	CBerlinger*	Ray Sanders*	BKGrimes*	CERoss
08/02/89	07/27/89	10/02/89	10/03/89	08/09/89	08/29/89	10/4/89

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There is no substitute for doing a thorough job of measuring and testing during receipt inspection. An accurate check of dimensions is often essential in determining if a part is acceptable, regardless of whether it is misrepresented or not. Testing to determine the material composition of a product is also critical, as was discovered during a recent instance of misrepresented fasteners.

It is recognized that testing is not always practical or economical. A thorough vendor audit program that prescribes appropriate standards is a viable option and should be aggressively pursued.

Discussion of Safety Significance:

The consequences of using misrepresented components vary significantly depending on the product and its end use. It is important to note that not all misrepresented components are substandard. Some misrepresented components may meet all of their operating requirements. It is the responsibility of licensees to justify their use on a case-by-case basis. However, NRC does not condone the use of misrepresented vendor products, regardless of their suitability for use. Licensees' procurement, receipt, and dedication programs should be complete and capable of ensuring that procured items conform to all specifications.

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