

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
OFFICE OF NUCLEAR REACTOR REGULATION
OFFICE OF NEW REACTORS
WASHINGTON, DC 20555-0001

September 24, 2018

NRC INFORMATION NOTICE 2018-11: KOBE STEEL QUALITY ASSURANCE RECORD
FALSIFICATION

ADDRESSEES

All holders of an operating license or construction permit for a nuclear power reactor under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," except those that have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

All holders of an operating license for a nonpower reactor (research reactor, test reactor, or critical assembly) under 10 CFR Part 50, except those that have permanently ceased operations.

All holders of and applicants for a power reactor early site permit, combined license, standard design approval, or manufacturing license under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." All applicants for a standard design certification, including such applicants after initial issuance of a design certification rule.

All holders of and applicants for a power reactor operating license under 10 CFR Part 50 that have exercised their general license for an independent spent fuel storage installation using dry storage under 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste."

All contractors and vendors that supply basic components, as defined in 10 CFR Part 21, to U.S. Nuclear Regulatory Commission (NRC) licensees under 10 CFR Part 50 or 10 CFR Part 52.

All holders of and applicants for a fuel cycle facility license under 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material."

All holders of and applicants for a transportation package certificate of compliance under 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

All holders of and applicants for a specific approval for transport of radioactive material shipping containers under 10 CFR Part 71.

PURPOSE

The NRC is issuing this information notice (IN) to alert addressees to a widespread quality assurance (QA) record falsification at Kobe Steel Limited (Kobe Steel) that took place over five decades, from the 1970s until recently.

DESCRIPTION OF CIRCUMSTANCES

According to the corporate profile on [its Web site](#), Kobe Steel is one of Japan's leading steel-making companies as well as a major supplier of aluminum and copper products. The Kobe Steel Group comprises numerous consolidated and equity-valued companies in Japan, the Americas, Asia, and Europe. As of March 31, 2018, the group included 212 subsidiaries and 55 affiliated companies. Kobe Steel held an American Society of Mechanical Engineers (ASME) Nuclear Material Organization Quality System Certificate but recently allowed it to expire.

Original Issue

On October 8, 2017, Kobe Steel announced that it had falsified QA data related to the strength and durability of some aluminum and copper products to appear that they met customer standards. Later that month, the scope was expanded to include steel powder, steel and stainless steel wire, and heavy plates, impacting 525 customers. The triggering event was the detection of a June 2016 quality issue at one of Kobe Steel Group's companies, Shinko Wire Stainless Company, Ltd. To address this problem, Kobe Steel established an independent investigation committee on October 26, 2017, as described in the Kobe Steel report, "[Improper Conduct in the Kobe Steel Group](#)," dated October 26, 2017, and posted on the company's Web site.

As a result of the announcement, the NRC staff gathered data on components used in the U.S. nuclear fleet that Kobe Steel manufactured or for which it supplied materials. The NRC staff identified dry cask storage materials, containment metallic components, and weld filler material at construction sites that were supplied by Kobe Steel but determined that they were not impacted by the falsification activities.

Recent Updates

On May 3, 2018, the NRC staff was contacted by the U.S. Department of Energy's Occurrence Reporting and Processing System with an update to the Kobe Steel QA record falsification issue with information released in a March 2018 investigation report by the Japanese government. The new information contained two major points:

- (1) The timeline of Kobe Steel's misconduct, initially estimated to be less than 10 years, or dating back to 2007, has been expanded to five decades, or dating back to the 1970s.
- (2) The number of impacted Kobe Steel customers is substantially larger than 525.

As a result of this update, the NRC staff further researched the Kobe Steel misconduct issue and found the following additional information:

- Since the establishment of the independent investigation committee, additional impacted products (such as compressors and industrial machinery) and services (such as corrosion analysis and heat treatment) were identified, bringing the number of impacted customers to 688.

- Some Kobe Steel staff falsified inspection data (i.e., as if they met customer specifications) or fabricated test data for unmeasured products (i.e., as if they were actually measured).
- According to Kobe Steel, the causes of the misconduct included overemphasis on profitability, inadequate corporate oversight, and insufficient quality control procedures.
- Kobe Steel has listed preventive measures to deal with the identified causes.

Additional information appears in Kobe Steel's [latest misconduct report, dated March 6, 2018](#), posted on the company's Web site.

BACKGROUND

Related NRC Requirements and Policy

NUREG/BR-0500, Rev. 4, "Safety Culture Policy Statement," dated May 31, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML18137A389](#)), defines nuclear safety culture as "the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment." The Safety Culture Policy Statement applies to all licensees, certificate holders, permit holders, authorization holders, holders of QA program approvals, vendors and suppliers of safety-related components, and applicants for a license, certificate, permit, authorization, or QA program approval, subject to NRC authority.

The [NRC Enforcement Policy \(ADAMS Accession No. ML16197A561\)](#), Section 2.2.1.d, on page 9, partly states, "Willful violations are of particular concern because the NRC's regulatory program is based on licensees and their contractors, employees, and agents acting with integrity and communicating with candor. The Commission cannot tolerate willful violations."

Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50 establishes QA requirements for the design, manufacture, construction, and operation of safety-related structures, systems, and components.

In 10 CFR Part 21, "Reporting of Defects and Noncompliance," and 10 CFR Part 50.55, "Conditions of Construction Permits, Early Site Permits, Combined Licenses, and Manufacturing Licenses," the NRC establishes procedures and requirements for reporting noncompliance activities associated with basic components that could create a substantial safety hazard.

Related NRC Generic Communications

[Information Notice 2013-15](#), "Willful Misconduct/Record Falsification and Nuclear Safety Culture," dated August 23, 2013 (ADAMS Accession No. ML13142A437), informed addressees of willful misconduct and record falsification incidents at U.S. nuclear sites and emphasized the importance of establishing and maintaining an effective safety culture by applicants, licensees, and their contractors.

[Information Notice 1995-45](#), "American Power Service Falsification of American Society for Nondestructive Testing (ASNT) Certificates," dated October 4, 1995 (ADAMS Accession No. ML031060177), informed addressees of deliberately falsified ASNT certificates given to an NRC licensee in connection with the procurement of commercial-grade services.

Related NRC Inspection Reports

Inspection Report No. 99901395/2017-201, "IHI Corporation," dated January 25, 2018 (ADAMS Accession No. [ML18024A739](#)), identified safety-related materials supplied by Kobe Steel to be used at U.S. nuclear construction sites. However, based on verification work by IHI, the inspectors concluded the Kobe Steel falsification activities did not impact the materials in question.

NRC Integrated Inspection Reports 05200027/2017003, 05200028/2017003, "Virgil C. Summer Nuclear Station Units 2 and 3," dated September 14, 2014 (ADAMS Accession No. [ML17257A407](#)), identified a Unit 2 reactor coolant pump casing material that Kobe Steel supplied. However, the review of the related certified material test report did not yield any findings. Shortly after this inspection, but for separate reasons, construction of Virgil C. Summer Nuclear Station, Units 2 and 3, was abandoned.

DISCUSSION

Kobe Steel used to hold an ASME Quality System Certificate, and the NRC staff found information during inspection activities that, as a third-party supplier, Kobe Steel sold parts for use in safety-related applications at U.S. nuclear facilities. The misconduct activities by Kobe Steel did not impact the parts in question. However, because Kobe Steel is typically a third-party supplier and because misconduct activities by some of its employees date to the 1970s, the NRC suggests that addressees review the information contained herein for potential impact on their nuclear safety-related activities. In addition, it is important for addressees to be vigilant about similar safety culture issues, particularly as they relate to third-party suppliers.

CONTACTS

Please direct any questions about this matter to the technical contact listed below.

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**INFORMATION NOTICE 2018-11, "KOBE STEEL QUALITY ASSURANCE RECORD
FALSIFICATION," Date: September 24, 2018**

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