

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

August 23, 2013

NRC INFORMATION NOTICE 2013-15: WILLFUL MISCONDUCT/RECORD
FALSIFICATION AND NUCLEAR SAFETY
CULTURE

ADDRESSEES

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

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

All contractors and vendors that supply basic components to U.S. Nuclear Regulatory Commission (NRC) licensees under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities" or 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

All holders of, or 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 specific source material license under Title 10 of the Code of Federal Regulations (10 CFR) Part 40, "Domestic Licensing of Source Material."

All holders of and applicants for a transportation package certificate of compliance or for a specific approval for transport of radioactive material shipping containers under 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

All holders of and applicants for an independent spent fuel storage installation license or a certificate of compliance 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 holders of and applicants for a gaseous diffusion plant certificate of compliance or an approved compliance plan under 10 CFR Part 76, "Certification of Gaseous Diffusion Plants."

PURPOSE

The NRC is issuing this information notice (IN) to inform addressees of recent willful misconduct and record falsification incidents at U.S. nuclear sites and to emphasize the importance of establishing and maintaining an effective safety-culture by applicants, licensees and their contractors. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. Suggestions contained in this IN are not NRC requirements; therefore, no specific action or written response is required.

DESCRIPTION OF CIRCUMSTANCES

Described below are seven recent willful misconduct incidents including record falsification that took place at U.S. nuclear facilities. The NRC enforcement policy states: "Licensees are expected to take significant remedial action in responding to the willful violations commensurate with the circumstances, such that the action reflects the seriousness of the violation, thereby creating a deterrent effect within the licensee organization." Therefore, licensees often take significant actions including the potential for employment termination for the individuals involved in willful misconduct or record falsification. The NRC may issue [escalated enforcement actions](#) to the individuals involved. Licensees establishing and maintaining an effective safety-culture is essential in helping prevent willful misconduct by ensuring that expectations and consequences are clearly stated and understood by all their employees, contractors and agents.

Record Falsification – Travelers for Field versus Design Drawings - Shaw AREVA Mixed Oxide (MOX) Services Fuel Fabrication Facility Construction Project - In 2009 a contract employee, a senior structural engineer, directed or allowed a junior engineer to sign his signature on travelers, contrary to an Engineering directive. Travelers are used as part of the process to signify that field drawings match design drawings. Thirty-seven travelers were identified in which the signature may not have been provided in accordance with requirements. The licensee completed an investigation which included an extent of condition review. Corrective actions included procedural revisions, several nuclear safety-culture initiatives and related training and communications to MOX Services personnel and contractors to preclude similar incidents. Additional information appears in the NRC confirmatory order available on the agency's public Web site in Agencywide Documents Access and Management System (ADAMS Accession No. [ML093280757](#)).

Record Falsification - Work Order Packages - Tennessee Valley Authority, Watts Bar Nuclear (WBN) Unit 2 Construction Project - In 2010 two subcontractor employees, one craft and one craft foreman, at WBN Unit 2 deliberately falsified micrometer readings identified in work order (WO) packages for primary containment penetrations, and falsely annotated on the WOs that micrometer readings had been performed for cables in these penetrations, when they had not been completed. Additionally, the craft foreman falsely attested that a WO review, field walkdown, review of craft documentation, and the scope of work had all been completed. Corrective actions included a prompt cessation of all containment electrical penetration work activities, the initiation of an internal review of the incident, a root cause and extent of condition review, procedural revisions, training related to the importance of 10 CFR 50.9 "Completeness and Accuracy of Information," and procedural compliance, the addition of language in major contracts stressing the importance of procedural compliance and the consequences of noncompliance, as well as various site-specific and fleetwide communications. Additional information is available in Enforcement Action (EA-12-021), and the NRC Confirmatory Order package (ADAMS Accession No. [ML12202A260](#)).

Record Falsification - Fire Drill Forms - Dominion Energy Kewaunee, Inc, Kewaunee Plant - A fire brigade trainer deliberately failed to conduct announced fire drills in accordance with applicable procedures and license condition and falsified the Fire Drill Evaluation/Critique Forms required by the site Fire Protection Program Plan quarterly “announced” fire drills (from at least August 2009 through December 2011). The “announced” fire drills were performed as training sessions instead of actual fire drills. The NRC issued a final significance determination on April 30, 2013, determining this to be a white finding, along with a Severity Level-III willful violation of License Condition 2.C.(3), “Fire Protection” and a violation of 10 CFR 50.9(a), “Completeness and Accuracy of Information.” Corrective actions by the licensee included initiating an internal investigation into the fire brigade trainer’s activities, taking disciplinary actions for both the trainer and the individual’s supervisor and conducting fire drills correctly, with no major deficiencies noted. Additional information is available in EA-12-266 “Final Significance Determination of a White Finding with Assessment Followup, Notice of Violation and Proposed Imposition of Civil Penalty - \$70,000: NRC Inspection Report Number 05000305/2013008; Kewaunee Power Station” (ADAMS Accession No. [ML13121A317](#)).

Record Falsification - Shift Check Forms - Southern Nuclear Operating Company, Vogtle Electric Generating Plant (Vogtle) Units 3 and 4 Construction Project - In 2012 a subcontracted employee falsified a concrete laboratory shift check form, at the Vogtle Units 3 & 4 construction project. Investigations substantiated that the subcontracted employee deliberately falsified the form and failed to identify to management or to correct equipment conditions adverse to quality. The employee listed the temperature recorder for safety-related concrete testing as operable and in range despite knowing the recorder was inoperable. The experimental safety-related concrete mix design in question was never used. Additional information appears in NRC Integrated Inspection Reports 05200025/2012-005 and 05200026/2012-005 section 40A7 “Licensee Identified Violations,” (ADAMS Accession No. [ML13030A390](#)).

Record Falsification - Hourly Fire Watch Patrols - Southern Nuclear Operating Company, Farley Nuclear Power Plant (Farley) - Between September and December 2011, four contract employees willfully failed to complete fire watch rounds required to ensure that Farley remained in compliance with 10 CFR 50.48 “Fire Protection.” In addition, these same employees falsified fire watch logs by annotating that hourly fire watches were completed when in fact they had not been performed. These actions caused Farley to be in violation of 10 CFR 50.48 and 10 CFR 50.9(a). Corrective actions included the prompt initiation of an investigation into the matter, an extent of condition review, the conduct of stand down meetings with the contractor to ensure that performance expectations were clearly understood, and other licensee fleet activities to strengthen oversight of supplemental personnel. Additional information is available in the NRC Notice of Violation; (ADAMS Accession No. [ML13063A274](#)).

Record Falsification - Radiation Training Examinations - NRC Issues Confirmatory Order to Southern Nuclear Operating Company, Farley Nuclear Power Plant – On May 7, 2013, the NRC issued News Release No: II-13-031 to inform the public of an NRC confirmatory order to Farley nuclear power plant. The order addresses a violation that involved a Farley security officer helping other security officers during radiation worker training exams or actually taking the exam for them and falsifying the associated records. The licensee has agreed to a series of corrective actions related to the company’s failure to ensure that radiation worker training exams for security officers were not compromised. Corrective action steps include fleetwide actions such as evaluating the testing environment and compliance with applicable training procedures at corporate and operating sites and communicating messages throughout the fleet regarding willful misconduct and its incompatibility with safe nuclear construction and operations. The licensee also held fleetwide stand-down to address and discuss integrity and trustworthiness.

Southern Nuclear Operating Company has committed to conducting an effectiveness review of all actions taken under the confirmatory order, and to evaluating and implementing actions to reinforce communications involving willful misconduct, integrity and trustworthiness annually until 2015. Additional information is available in the NRC Confirmatory Order, EA-12-145, (ADAMS Accession No. [ML13127A144](#)).

Misrepresentation – Display Serial Numbers - Pentas Controls, LLC (Pentas) - In 2010, the owner/president of Pentas directed one of his employees to switch a broken display on a Peach Bottom Atomic Power Station steam leak detector monitor with a working display unit from the Brunswick Nuclear Plant site. Before its shipment, the owner/ president also instructed an employee to file down the serial number on the substitute display to conceal its identity and to ship the working display to Peach Bottom without informing that site of the switch. On March 15, 2011, the owner/president made false statements to NRC investigators by repeatedly denying that the unrepairable Peach Bottom display had been substituted with a working display from Brunswick site.

Because of the egregiousness of the owner/president's actions, the U. S. Department of Justice (DOJ) prosecuted the case in Federal district court in Phoenix, AZ. The president pled guilty to making false statements to NRC investigators, a felony, and was sentenced on February 11, 2013. In exchange for his guilty plea, the president will serve a 5-year probation during which time he will complete several conditions that the NRC developed and included in the DOJ's global settlement agreement. The NRC will monitor these conditions. As part of the agreement, the owner/president was required to notify his employees of his violation and its consequences and Pentas was required to conduct training on safety-related activities and hire an outside contractor to conduct employee protection training. The owner/president was banned from safety-related decision making for 1 year and from quality-assurance oversight activities indefinitely. Additional information is available in Judgment in Department of Justice prosecution of President of Pentas Controls, Inc., including Terms of Probation (ADAMS Accession No. [ML13213A376](#)) and in the NRC Enforcement Program Annual Report, Calendar Year 2012, on page 16; (ADAMS Accession No. [ML13079A446](#)).

BACKGROUND

10 CFR 50.9, 10 CFR 52.6, and 10 CFR 70.9, as applicable, all titled "Completeness and Accuracy of Information," state that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee, shall be complete and accurate in all material respects. Regulations in 10 CFR 50.5, 10 CFR 52.4 and 10 CFR 70.10, as applicable, all titled "Deliberate Misconduct," have more detailed requirements and specifically prohibit deliberate misconduct.

Related NRC Generic Communications and Website Information

The NRC has previously issued numerous generic communications related to safety-culture, deliberate misconduct and issues involving proper oversight of contractors or subcontractors. The following represents some of the recent related NRC generic communications:

NRC Bulletin 2007-01, "Security Officer Attentiveness," dated December 12, 2007. This bulletin requested information on licensee administrative and managerial controls to deter and address inattentiveness and complicity among licensee security personnel including contractors and subcontractors; (ADAMS Accession No. [ML073400150](#)).

NRC Regulatory Issue Summary (RIS) 2006-13, "Information on the Changes Made to the Reactor Oversight Process to More Fully Address Safety Culture," dated July 31, 2006. This RIS documented changes made to the reactor oversight process (ROP) to more fully address safety-culture; (ADAMS Accession No. [ML061880341](#)).

NRC RIS 2005-18, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment," dated August 25, 2005. This RIS provided licensees, applicants for a license, holders of certificates of compliance, and their contractors guidance on establishing and maintaining a safety-conscious work environment; (ADAMS Accession No. [ML052220239](#)).

NRC IN 2002-36, "Incomplete or Inaccurate Information Provided to the Licensee and/or NRC by Any Contractor or Subcontractor Employee," dated December 27, 2002. This IN reminded addressees of the importance of diligently ascertaining the accuracy of educational background and professional qualifications of any contractor or subcontractor employees subject to such qualification requirements and alerted them about the potential penalties that could result from intentionally providing incomplete or inaccurate information to the NRC; (ADAMS Accession No. [ML023650299](#)).

NRC RIS 12-01, "Availability of Safety Culture Policy Statement," dated January 17, 2012. This informs addressees of the availability of the Commission's safety-culture policy statement; (ADAMS Accession No. [ML112940226](#)).

The NRC Safety Culture Policy Statement was issued in the Federal Register on June 14, 2011 (ADAMS Accession No. [ML111650336](#)). The NRC policy statement 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.**" Note: This policy statement applies to all licensees, certificate holders, permit holders, authorization holders, holders of quality assurance program approvals, vendors and suppliers of safety-related components, and applicants for a license, certificate, permit, authorization, or quality assurance program approval subject to NRC authority. Nuclear safety-culture program information is available (in both English and Spanish) at the NRC public Website link:

<http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html#programs>

DISCUSSION

As stated in the [NRC Enforcement Policy](#) (on page 9, section 2.2.1.d): "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. Therefore, a violation may be considered more significant than the underlying noncompliance if it includes indications of willfulness."

An effective safety-culture is essential to nuclear safety at all phases of design, construction and operation and can help prevent willful misconduct by ensuring expectations and consequences are clearly stated and understood. Construction activities present additional challenges as new employees join the nuclear workforce for the first time. Often, these new employees lack familiarity with the nuclear safety-culture expectations needed to conduct their work activities in accordance with regulatory requirements and may require extra guidance. For example, they may not understand and recognize the significance of their signatures as they relate to complying with the requirements (10 CFR 50.5, 10 CFR 50.9, 10 CFR 52.4, 10 CFR 52.6, 10 CFR 70.9, and 10 CFR 70.10, as applicable). In addition, employees new to the commercial nuclear industry may wrongly believe based on previous non-nuclear experience, that they can

interpret certain work procedure steps or have more latitude in deviating from procedural guidance.

Key behaviors of a healthy safety-culture need to be continually reinforced. These behaviors include personal accountability, including admitting mistakes, demonstrating a questioning attitude and a willingness to raise concerns and engaging with management in problem resolution. Trust and respect need to permeate each organization while communications maintain a focus on nuclear safety and leaders demonstrate a commitment to safety in their decisions and behaviors.

CONCLUSION

The above willful misconduct issues and discussion highlights the need for applicants, licensees, contractors and suppliers involved in construction, fabrication activities, and operations of nuclear facilities, to establish and implement an effective nuclear safety-culture. This includes training, adequate oversight, and frequent communications especially for workers new to the nuclear industry. Safety-culture weaknesses have been identified as one of the causes of major accidents and incidents such as the Fukushima nuclear accident in Japan in 2011, the Davis-Besse reactor vessel head degradation near-miss incident discovered in 2002, the Chernobyl accident in the former Soviet Union in 1986, and the Three Mile Island Unit 2 accident in 1979.

The NRC continually looks for signs of wrongdoing (willful misconduct, deliberate violations and careless disregard) when inspecting, evaluating inspection findings, reviewing licensee corrective action programs, reviewing licensee employee concerns programs, and responding to allegations. Wrongdoing (e.g., falsification of records) may be referred to the U.S. Department of Justice for prosecution and may result in civil fines, criminal penalties, or Orders being issued to licensees, as well as to the individuals involved.

The NRC expects that recipients will review the information in this information notice for applicability to their facilities and consider actions, as appropriate, to avoid similar problems.

CONTACTS

This IN requires no specific action or written response. Please direct any questions about this matter to the appropriate technical contacts listed below or the appropriate project manager.

/RA/

Laura A. Dudes, Director
Division of Construction Inspection
and Operational Programs
Office of New Reactors (NRO)

/RA/

Lawrence E. Kokajko, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation (NRR)

/RA/

Mark Lombard, Director
Division of Spent Fuel Storage
and Transportation
Office of Nuclear Material Safety
and Safeguards

/RA/

Marissa G. Bailey, Director
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety
and Safeguards

Technical Contacts: Alfred Issa, NRO
301-415-5342
E-mail: Alfred.Issa@nrc.gov

Mark King, NRR
301-415-1150
E-mail: Mark.King@nrc.gov

Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under NRC Library/Document Collections.

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Office of Nuclear Material Safety
and Safeguards

/RA/

Marissa G. Bailey, Director
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety
and Safeguards

Technical Contacts: Alfred Issa, NRO
301-415-5342
E-mail: Alfred.Issa@nrc.gov

Mark King, NRR
301-415-1150
E-mail: Mark.King@nrc.gov

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*via e-mail

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OFFICE	NRO/DCIP/CAEB	Tech Editor	NRO/DCIP/CAEB	NRR/DLR/RAPB/BC
NAME	AIssa	QTE - CHSU	RLukes	SBloom (acting)
DATE	7/18/13	* 7/25/13	7/19/13	7/19/13
OFFICE	OE/CRB	OE/CRB/BC	NRR/DPR/PGCB/LA	NRR/DPR/PGCB/PM
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DATE	7/23/13	7/23/13	8/2/13	7/25/13
OFFICE	NRR/DPR/PGCB/BC	NRR/DPR/ DD		
NAME	DPelton	SBahadur		
DATE	8 / 6 /13	8 / 22 /13		
OFFICE	NMSS/SFST/D	NMSS/FCSS/D	NRO/ DCIP/D	NRR/DPR/ D
NAME	MLombard	MBailey	LDudes	LKokajko
DATE	8 / 13 /13	8 / 15 /13	8 / 19 /13	8 / 23 /13

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