

October 22, 2015

EA-14-230

Dr. Sean McDeavitt, Director  
Texas A&M University  
Texas A&M Engineering Experiment Station  
Nuclear Science Center  
1095 Nuclear Science Road, M/S 3575  
College Station, TX 77843-3575

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$3,500.00 (NUCLEAR REGULATORY COMMISSION INSPECTION REPORT 50-128/2015-202 AND OFFICE OF INVESTIGATIONS REPORT NO. 4-2014-010, TEXAS A&M NUCLEAR SCIENCE CENTER)

Dear Dr. McDeavitt:

This refers to an investigation completed on December 1, 2014, by the U.S. Nuclear Regulatory Commission (NRC) Office of Investigations (OI) at the Texas A&M Nuclear Science Center (Texas A&M NSC), College Station, Texas, as described in NRC Inspection Report 50-128/2015-202 dated September 11, 2015.

The purpose of the investigation was to determine whether the reactor operations manager willfully falsified a reactor operations log shutdown checklist. The investigation examined whether the manager certified that the required shutdown procedures were performed, although the manager knew they had not been done. The inspection report documented the identification of two apparent violations involving the failure to comply with the required procedures for securing the reactor console and willful falsification of procedurally required paperwork. In addition, Texas A&M NSC staff failed to meet the minimum facility staffing requirements on May 14-15, 2013. This non-willful violation occurred during the time the reactor was not secured. Both apparent violations were considered for escalated enforcement in accordance with the NRC's Enforcement Policy.

In the letter transmitting the inspection report, we provided you the opportunity to address the apparent violations identified in the report by either attending a pre-decisional enforcement conference, providing a written response, or requesting alternative dispute resolution (ADR) before we made our final enforcement decision. In a letter dated October 8, 2015, you provided a written response to the apparent violations. In your response, you accepted the violations as described in the inspection report, including the willful aspects, and provided details of your corrective actions to preclude recurrence.

Based on the information developed during the investigation and the information that you provided in your response of October 8, 2015, the NRC has determined that two violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice). The circumstances surrounding them are described in detail in NRC Inspection Report 50-128/2015-202 dated September 11, 2015.

The first violation involves the Texas A&M NSC staff's failure to comply with Technical Specifications (TS), Appendix A, to License No. R-83, Sections 1.23 and 1.27. These sections detail the required procedures for securing the reactor console. The Nuclear Science Center (NSC) Standard Operating Procedure (i.e., NSC Form-112, 1-73) was also violated when the manager certified on the Daily Reactor Shutdown Checkoff section of the reactor operations log that the shutdown procedures had been completed when in fact they had not been completed. The reactor operations manager's actions were not in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.5, "Deliberate misconduct," paragraph (a). The willful actions of the manager resulted in Texas A&M NSC violating 10 CFR 50.9, "Completeness and accuracy of information," states, in part, that information required by the Commission's regulations, orders, or license conditions to be maintained shall be accurate in all material respects. Specifically, on or after May 15, 2013, the reactor operations manager willfully falsified the reactor operations log shutdown checklist by certifying that the required shutdown procedures had been completed when they had not been performed. The inaccurate reactor operations log shutdown checklist was material to the NRC because it provided evidence of completion of a procedure required by Texas A&M NSC's TS.

The second violation involves the non-willful failure of Texas A&M NSC to meet the minimum facility staffing requirements on May 14–15, 2013, during which time the reactor was not secured. TS 6.1.3, "Staffing," requires that at least two individuals, a senior reactor operator and either a licensed reactor operator or operator trainee, be on duty when the reactor is not secured. The senior reactor operator and reactor operator left the facility complex without securing the reactor, resulting in a violation of staffing requirements on May 14–15, 2013.

Although these violations did not result in an actual consequence, the failure to provide accurate and complete information is of significant concern to the NRC. The NRC's regulatory program is based on licensees and their employees acting with integrity and communicating with candor. The NRC cannot tolerate willful violations. Although the actions were taken by an individual, the NRC generally holds licensees accountable for the actions of their employees. Given the significance of the underlying issues and the deliberate nature of the reactor operations manager's actions, these violations are collectively categorized in accordance with the NRC Enforcement Policy as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$3,500.00 is considered for a Severity Level III problem. Because the violation was willful, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy. The NRC determined that credit was not warranted for *Identification* as the violation was identified by the NRC. Your corrective actions include, but were not limited to: (1) restoring the proper emphasis on the purpose of checkoffs, checklists, and procedures by establishing checkoffs and checklists that are completed when actions are undertaken and internally audited at the end of every operating day; (2) reviewing the audit documents at the beginning of the next operating day to verify conformance; (3) conducting a re-audit of reactor operations logbooks when each logbook is complete (approximately quarterly); (4) investigating and documenting deviations by a memo attaching the memo to the original document that explains the deviation its effect of the deviation; (5) bringing deviations to the attention of management, outside of the operations

department, in a timely manner; and (6) sharing information about the deviations and the results of deviation investigations with the Texas A&M NSC staff in a timely manner. Additionally, you are in the process of revising your facility operating procedures (SOP-II), including your facility staffing procedures to ensure (1) the licensed operator in the control room is the person who understands the condition of the entire site, (2) mid-day changes in staffing are logged appropriately, and (3) training modules that explain checkoffs, checklists, and procedures reflect the changed facility operating procedures. You have estimated that formal submission of the revised SOP-II will be made at the Reactor Safety Board scheduled for Fall 2015. The NRC requests that the determination of the Reactor Safety Board be submitted to NRC, when issued.

Based on the above actions, the NRC determined that credit was warranted for *Corrective Action*.

Therefore, to emphasize the importance of procedural compliance, accurate and complete information, compliance with technical specifications, and the identification of violations, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$3, 500.00.

If you disagree with this enforcement sanction, you may deny the violation, as described in the Notice, or you may request ADR with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflict outside of court using a neutral third party. The technique that the NRC has decided to employ is mediation. In mediation, a neutral mediator with no decision-making authority helps parties clarify issues, explore settlement options, and evaluate how best to advance their respective interests. The mediator's responsibility is to assist the parties in reaching an agreement. However, the mediator has no authority to impose a resolution upon the parties. Mediation is a confidential and voluntary process. If the parties to the ADR process agree to use ADR, they select a mutually agreeable neutral mediator and share equally the cost of the mediator's services. Additional information concerning the NRC's ADR program can be found at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>.

The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as an intake neutral. Intake neutrals perform several functions, including: assisting parties in determining ADR potential for their case, advising parties regarding the ADR process, aiding the parties in selecting an appropriate mediator, explaining the extent of confidentiality, and providing other logistic assistance as necessary. If you are interested in pursuing this issue through the ADR program, within 10 days of the date of this letter, please contact: (1) the ICR at (877) 733-9415; and (2) Dr. Kevin Hsueh at (301) 415-7256. You may also contact both ICR and Dr. Hsueh for additional information.

The NRC has concluded that information regarding: (1) the reason for the violations; (2) the corrective actions that have been taken and the results achieved; and (3) the date when full compliance was achieved is already adequately addressed on the docket in the letter from you dated October 8, 2015. Therefore, you are not required to respond to this letter unless the description does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room and from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, if you choose to provide one, 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, 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 is 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 will 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.

The NRC recognizes that positive changes to the Texas A&M NSC culture, organization, and procedures have occurred under your leadership since the 2013 events and we look forward to receiving the requested information on the Reactor Safety Board's determination.

If you have any questions, please contact Dr. Kevin Hsueh at (301) 415-7256.

Sincerely,

***/Mirela Gavrilas for RA/***

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

Docket No. 50-128  
License No. R-83

Enclosure:  
Notice of Violation  
and Proposed Imposition of Civil Penalty

In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room and from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, if you choose to provide one, 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, 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 is 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 will 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.

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Sincerely,

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

Docket No. 50-128  
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Notice of Violation  
and Proposed Imposition of Civil Penalty

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<b>OFFICE</b>	NRR/DPR/PROB*	NRR/DPR/LA	NRR/DIRS/IPAB*	OGC/NLO*
<b>NAME</b>	GMorlang	NParker	LCasey	PJehle
<b>DATE</b>	10/21/2015	10/20/2015	10/20/2015	10/20/2015
<b>OFFICE</b>	OE/EB*	NRR/DPR/PROB/BC	NRR/DPR/DD*	NRR/DPR/D*
<b>NAME</b>	RFretz	KHsueh	MGavrilas	(MGavrilas for) LKokajko
<b>DATE</b>	10/20/2015	10/16/2015	10/22/2015	10/22/2015

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NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Texas A&M University  
Nuclear Science Center  
College Station, TX

Docket No. 50-128  
License No. R-83  
EA-14-230

During an U.S. Nuclear Regulatory Commission (NRC) investigation completed on December 1, 2014, violations of NRC requirements were identified. The particular violations are set forth below:

- A. Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.9, "Completeness and accuracy of information," paragraph (a) states, in part, that information required by the Commission's regulations, orders, or license conditions to be maintained shall be complete and accurate in all material respects.

10 CFR 50.21, "Class 104 licenses; for medical therapy and research and development facilities," states, in part, that a class 104 license will be issued, to a production or utilization facility, which is useful in the conduct of research and development activities, for any one or more of the following: to transfer or receive in interstate commerce manufacture, produce, transfer, acquire, possess, or use.

10 CFR 50.36, "Technical specifications," paragraph (b), states, in part, "Each license authorizing operation of a production or utilization facility of a type described in §50.21 or § 50.22 will include technical specifications." Paragraph (c), states, in part, "Technical specifications will include items in the following categories: (1) "Safety limits, limiting safety system settings, and limiting control settings..., (2) Limiting conditions for operations..., and (5) Administrative controls...."

Technical Specification (TS) 6.3, "Operating Procedures," requires, in part, operating procedures shall be in effect for the startup, operation, and shutdown of the reactor.

Texas A&M Nuclear Science Center (Texas A&M NSC) Standard Operating Procedure NSC Form 112 1-73, "Reactor Shutdown," Section 2.a states (a) the SRO will instruct the RO to shut down the reactor, and (b) the RO record the shutdown in the operations log, and (c) the RO visually verify all rods are down. Section 2.c of the procedure requires, in part, that, the Daily Reactor Shutdown Checkoff section of the reactor operations log be completed following the last shutdown of the day. The Daily Reactor Shutdown Checkoff includes the same checklist items that are listed in Section 2.a of Standard Operating Procedure NSC Form 112 1-73.

Contrary to the above, on May 15, 2013, the licensee failed to maintain complete and accurate records in all material respects. Specifically, on or after May 15, 2013, the reactor operations manager created an incomplete and inaccurate record when the reactor operations manager willfully falsified the May 14, 2013, reactor operations log shutdown checklist, stating that the required shutdown procedures were performed when in fact they had not been performed. The Daily Reactor Shutdown Checkoff is a safety record that documents that mandatory procedures for the safe shutdown of a reactor were performed.

Enclosure

The licensee is required to maintain these records for inspection by the NRC staff and the completeness and accuracy of this safety information is material to the NRC inspection process.

- B. 10 CFR 50.21, states, in part, that a class 104 license will be issued, to a production or utilization facility, which is useful in the conduct of research and development activities, for any one or more of the following: to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use.

10 CFR 50.36, paragraph (b), states, in part, "Each license authorizing operation of a production or utilization facility of a type described in § 50.21 or § 50.22 will include technical specifications." Paragraph (c), states, in part, "Technical specifications will include items in the following categories: (1) Safety limits, limiting safety system settings, and limiting control settings..., (2) Limiting conditions for operations..., and (5) Administrative controls...."

TS 1.26, "Reactor Secured," states a reactor is secured when: a) It contains insufficient fissile material or moderator present in the reactor and adjacent experiments to attain criticality under optimum available conditions of moderation and reflection, or b) The reactor console is secured and 1) No work is in progress involving core control, core structure, installed control rods, or control rod drives unless they are physically decoupled from the control rods, and 2) No experiments in or near the reactor are being moved or serviced that have, on movement, a reactivity worth exceeding the maximum value of one dollar.

TS 1.23, "Reactor Console Secured," states "The reactor console is secured whenever all scrammable rods have been fully inserted and verified down and the console key has been removed from the console."

TS 6.1.3(a), "Staffing," states, in part, that the minimum staffing when the reactor is not secured shall be as follows: 1) At least two individuals will be present at the facility complex and will consist of a licensed senior reactor operator and either a licensed reactor operator or operator trainee. . . .2) A licensed reactor operator or senior reactor operator will be in the control room.

Contrary to the above, on May 14, 2013, the facility complex did not maintain minimum staffing requirements and failed to have a senior reactor operator (SRO) and either a licensed reactor operator (RO) or operator trainee on duty when the reactor was not secured. Specifically, the reactor was not secured on the night of May 14-15, 2013, when the SRO and RO left the facility—in violation of TSs 1.26, 1.23, and 6.1.3(a). The licensee did not meet the requirements of TS 1.26(a) because the reactor contained sufficient fissile material to attain criticality under optimum available conditions of moderation and reflection. Therefore, the requirements of TS 1.26(b) had to be met for the reactor to be secure. However, TS 1.26(b) was not met because the reactor console was not secured according to the requirements of TS 1.23 in that not all scrammable rods were fully inserted and verified down.

This is a Severity Level III Problem (NRC Enforcement Policy Section 6.9, 6.1)  
Civil Penalty - \$3, 500 (EA-14-230).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in a letter from Texas A&M NSC dated October 8, 2015. However, if the description therein does not accurately reflect your position or your corrective actions, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 within 30 days of the date of the letter transmitting this Notice of Violation (Notice). In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation", include the violation number, and send it to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville, MD 20852-2738, with a copy to the Director, Office of Nuclear Reactor Regulation, and the Document Control Desk, Washington, DC 20555-0001 within 30 days of the date of the letter transmitting this Notice.

Texas A&M Nuclear Science Center may pay the civil penalty proposed above in accordance with NUREG/BR-0254 and by submitting to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, a statement indicating when and by what method payment was made, or may protest imposition of the civil penalty in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice.

Should Texas A&M NSC fail to answer within 30 days of the date of this Notice, the NRC will issue an order imposing the civil penalty. Should Texas A&M NSC elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation," and may: (1) deny the violations listed in this Notice, in whole or in part; (2) demonstrate extenuating circumstances; (3) show error in this Notice; or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed civil penalty, the response should address the factors addressed in Section 2.3.4 of the Enforcement Policy. Any written answer addressing these factors pursuant to 10 CFR 2.205 should be set forth separately from the statement or explanation provided pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of Texas A&M NSC is directed to the other provisions of 10 CFR 2.205 regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty which subsequently has been determined in accordance with the applicable provisions of 10 CFR 2.205 to be due, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.



The responses noted above, i.e., Reply to Notice of Violation, Statement as to payment of civil penalty, and Answer to a Notice of Violation, should be addressed to: Patricia Holahan, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Director, Office of Nuclear Reactor Regulation, and the Document Control Desk, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information. 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 is 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 will 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.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 22<sup>nd</sup> day of October, 2015.