



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

October 4, 2018

Captain John Gilstad, Director  
Armed Forces Radiobiology  
Research Institute  
National Naval Medical Center  
8901 Wisconsin Avenue  
Bethesda, Maryland 20889-5603

SUBJECT: ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE – U.S. NUCLEAR  
REGULATORY COMMISSION REACTIVE SAFETY CONSCIOUS WORK  
ENVIRONMENT ISSUE OF CONCERN FOLLOW-UP INSPECTION REPORT  
NO. 05000170/2018450

Dear Captain Gilstad:

From August 14-15, 2018, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Armed Forces Radiobiology Research Institute (AFRRI) reactor facility. The purpose of this reactive inspection was to conduct an assessment of the safety conscious work environment (SCWE) attribute of AFRRI's safety culture. The enclosed report documents the results of this inspection.

The Final Safety Culture Policy Statement (76 FR 34773; June 14, 2011) sets forth the Commission's expectation that licensees establish and maintain a positive safety culture commensurate with the safety and security significance of their activities and the nature and complexity of their organizations and functions. The NRC 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. A safety conscious work environment is defined by the NRC as an environment in which "employees are encouraged to raise safety concerns, are free to raise concerns to both their management and NRC without fear of retaliation, where concerns are promptly reviewed, given the appropriate priority, and are appropriately resolved, and where timely feedback is provided" and is one trait of a strong safety culture. NRC Regulatory Issue Summary 05-18, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment," dated August 25, 2005, further describes the NRC's expectations in this area.

The inspection examined AFRRI management's ability to create and maintain a safety conscious work environment, where employees are free to raise nuclear safety or regulatory issues without fear of retaliation, by conducting interviews with AFRRI staff. Based on the results of this inspection, the NRC inspectors identified that in general, AFRRI staff members appear hesitant to raise safety concerns or regulatory issues to upper management at AFRRI because they fear retaliation if they do so. No non-compliances with NRC regulations were identified and no written response to this letter is required at this time, however, the NRC expects AFRRI management will take action to both access the SCWE and correct identified weaknesses. The NRC will continue to monitor the environment to determine if further

regulatory action is necessary, such as those outlined in Section 5.2.i.6(a) of the NRC Allegation Manual (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17003A227).

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

To the extent possible, your written response, if provided, should not include any personal, privacy, or proprietary information so that it can be made available to the Public without redaction.

If you have any questions concerning this inspection, please contact Michael Takacs at 301-415-2042, or by electronic mail at [Michael.Takacs@nrc.gov](mailto:Michael.Takacs@nrc.gov).

Sincerely,

*/RA/*

Anthony J. Mendiola, Chief  
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Office of Nuclear Reactor Regulation

Docket No. 50-170  
License No. R-84

Enclosure:  
As stated

cc: w/enclosures: See next page

Armed Forces Radiobiology Research Institute

Docket No. 50-170

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SUBJECT: ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE – U.S. NUCLEAR REGULATORY COMMISSION REACTIVE SAFETY CONSCIOUS WORK ENVIRONMENT ISSUE OF CONCERN FOLLOW-UP INSPECTION REPORT NO. 05000170/2018450 DATED OCTOBER 4, 2018

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**OFFICE OF NUCLEAR REACTOR REGULATION**

Docket No: 50-170

License No: R-84

Report No: 05000170/2018450

Licensee: Armed Forces Radiobiology Research Institute

Facility: AFRRRI Research Reactor Facility

Location: Bethesda, MD

Dates: August 14-15, 2018

Inspection Team: Sara Bernal-Taylor  
Ashley Ferguson  
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Approved by: Anthony J. Mendiola, Chief  
Research and Test Reactors Oversight Branch  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation

Enclosure

## EXECUTIVE SUMMARY

Armed Forces Radiobiology Research Institute  
AFRRI Research Reactor Facility  
NRC Inspection Report No. 05000170/2018450

The primary focus of this reactive, announced safety conscious work environment (SCWE) issue of concern follow-up inspection was to determine Armed Forces Radiobiology Research Institute (AFRRI) staff's: (1) knowledge of methods to raise safety concerns within AFRRI; (2) willingness to raise safety concerns to their management without fear of retaliation; and (3) perception of management's support of a healthy SCWE at AFRRI.

The inspectors determined that, in general, AFRRI staff members are reluctant to raise safety concerns or regulatory issues to upper management at AFRRI because they fear reprisal if they do so. While AFRRI staff members are willing to raise safety concerns or regulatory issues with their first line supervisors/managers; the inspectors noted that the current first line supervisors/managers will be retiring from AFRRI in the near future, thus challenging the SCWE since AFRRI staff members have also expressed hesitancy to raise safety concerns with the successors to the first line supervisor/manager positions and upper management.

## REPORT DETAILS

### Summary of Facility Status

The AFRRRI 1 megawatt Training Research Isotope General Atomic Mark II research reactor, located on the campus of the Walter Reed National Military Medical Center, is operated in support of the Institute's mission of research, experiments, education, training, and testing. During the inspection, the reactor was shut down and secured for maintenance and testing.

### 1. Safety Conscious Work Environment

#### a. Inspection Scope

The inspectors reviewed the environment at AFRRRI using Inspection Procedure 93100, "Safety-Conscious Work Environment Issue of Concern Follow-up." The inspectors reviewed licensee SCWE-related policies, communications, training materials and any Safety Culture (SC) or SCWE assessments conducted by the licensee in the past 2 years. The inspectors accessed the SCWE by interviewing a number of employees and security officers with responsibilities at the Radiation Sciences Department at AFRRRI.

#### b. Inspection Observations

The inspectors conducted interviews with AFRRRI staff members having responsibilities related to the operation and security of the research reactor. After reviewing the organizational chart and determining that the same management over the reactor was also over the Cobalt-60 irradiator and the dosimetry staff, the inspectors expanded the scope of the interviews to include personnel from these groups. The inspectors asked questions regarding AFRRRI staff's: (1) knowledge of methods to raise safety concerns within AFRRRI; (2) willingness to raise safety concerns to their management without fear of retaliation; and (3) perception of the management's support of a healthy SCWE at AFRRRI.

The inspectors determined that, in general, AFRRRI staff members were not hesitant to raise safety concerns to their current immediate supervisors. The inspectors identified that two of the current supervisors are planning to retire within 30 days of the inspection and that there is a concern amongst the majority of AFRRRI staff members that upon the retirement of their current supervisors, they will not feel free to raise concerns without fear of reprisal to the successor. In addition, a significant portion of AFRRRI staff members expressed a hesitation to raise safety concerns to management levels above their immediate supervisors. The inspectors considered this to be a weakness in the SCWE at AFRRRI. The inspectors noted that the staff did not currently have any safety issues that were not reported to management.

Through interviews with AFRRRI first line supervisors/managers, the inspectors identified that staff at the AFRRRI management level are also reluctant to raise safety concerns to AFRRRI upper management because they fear reprisal for doing so. AFRRRI first line supervisors/managers expressed their concerns began with the previous upper management staff however the environment has not improved under current

management. The inspectors also considered this to be a weakness in the SCWE at AFRRRI.

The inspectors determined that AFRRRI does not have a formal employee concerns program, however it practices an open door policy. In addition, AFRRRI does not have a formal SCWE or SC policy that provides staff with the expectations for an environment where employees are free to raise safety concerns without fear of retaliation. The inspectors reviewed a recent climate survey which was conducted at the AFRRRI facility. The inspectors noted that the survey did not address AFRRRI staff member's willingness to report safety concerns without fear of reprisal and only received a 23 percent participation rate and did not provide a good statistical representation of AFRRRI staff. Although the survey was not representative of the entire population, the survey did identify areas in need of improvement regarding treatment of staff. The inspectors noted that AFRRRI had not taken any corrective actions in order to address the areas in need of improvement at the time of the inspection.

c. Conclusion

The inspectors determined that, in general, AFRRRI staff members are hesitant to raise safety concerns or regulatory issues to upper management at AFRRRI. While AFRRRI staff members are willing to raise safety concerns or regulatory issues with their first line supervisors/managers, the inspectors noted that the current first line supervisors/managers will be retiring from AFRRRI in the near future, thus challenging the SCWE since AFRRRI staff members have expressed hesitance to raise safety concerns with the successors to the first line supervisor/manger positions and upper management.

**Exit Interview**

The inspection scope and results were summarized during an exit meeting on September 14, 2018, with members of licensee management and staff. The inspection team described the areas inspected and discussed significant inspection observations.

**PARTIAL LIST OF PERSONS CONTACTED**

Licensee

Per NRC's identity protection guidance, names of individuals contacted are withheld.

**INSPECTION PROCEDURES USED**

IP 93100

Safety Conscious Work Environment Issue of Concern Follow Up

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

None

Closed

None

Discussed

None

**PARTIAL LIST OF ACRONYMS USED**

AFRRI	Armed Forces Radiobiology Research institute
SC	Safety Culture
SCWE	Safety Conscious Work Environment
NRC	U.S. Nuclear Regulatory Commission