

April 5, 2011

EA-10-129

Lieutenant General Rick Lynch  
Department of the Army  
U.S. Installation Management Command  
600 Army Pentagon  
Washington, DC 20310-0600

SUBJECT: APPARENT VIOLATION OF U.S. NUCLEAR REGULATORY COMMISSION  
REGULATIONS AND REQUEST FOR PREDECISIONAL ENFORCEMENT  
CONFERENCE

Dear Lt. General Lynch:

This letter pertains to the U.S. Army's apparent violation of U.S. Nuclear Regulatory Commission (NRC) regulations at 10 CFR § 40.3. It appears to the NRC that the Army possesses depleted uranium (DU) at multiple Army installations without an NRC license to do so and performed decommissioning at the Army's Schofield Barracks, Hawaii installation without authorization from NRC. The basis for this apparent violation is discussed in detail in Enclosure 1. This apparent violation was discussed with Dr. Robert Cherry on April 4, 2011.

The described apparent violation is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's web site at (<http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>). Since the NRC has not made a final determination in this matter, a Notice of Violation is not being issued at this time. In addition, please be advised that the characterization of the apparent violation may change as a result of further NRC review.

Before the NRC makes its enforcement decision, the NRC requests an open predecisional enforcement conference (PEC) with the Army. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has actually occurred or that an enforcement action will be taken. The purpose of this conference is to obtain information to assist the NRC in making an informed enforcement decision. This may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned to be taken. The predecisional enforcement conference will provide an opportunity for you to present your perspective on the apparent violation and any other information that you believe the NRC should take into consideration in making an enforcement decision. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violation. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," (Enclosure 2) may be helpful. Enclosure 3 to this letter describes information the Army should be prepared to discuss at the predecisional enforcement conference.

You will be contacted by the NRC to arrange the date, time, and location of the PEC; however, the NRC would expect to hold this conference within 30 days of the date of this letter. This conference will be open for public observation in accordance with Section 2.4 of the NRC Enforcement Policy, and the NRC will issue a press release to announce the time and date of the conference. Should you choose not to participate in a PEC, the NRC will consider taking an enforcement action based on the information available at this time. That enforcement action could include a formal notice of violation, order, or civil penalty.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding the apparent violation is required at this time.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document 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, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions, please contact Michele Burgess at (301) 415-5868.

Sincerely,

**/RA/**

Keith McConnell, Deputy Director  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Material  
and Environmental Management Programs

Docket No: 40-9083

Enclosures:

1. Basis for Apparent Violation
2. NRC Information Notice 96-28
3. Issues to be Discussed at Predecisional Enforcement Conference

You will be contacted by the NRC to arrange the date, time, and location of the PEC; however, the NRC would expect to hold this conference within 30 days of the date of this letter. This conference will be open for public observation in accordance with Section 2.4 of the NRC Enforcement Policy, and the NRC will issue a press release to announce the time and date of the conference. Should you choose not to participate in a PEC, the NRC will consider taking an enforcement action based on the information available at this time. That enforcement action could include a formal notice of violation, order, or civil penalty.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding the apparent violation is required at this time.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document 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, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions, please contact Michele Burgess at (301) 415-5868.

Sincerely,  
/RA/

Keith McConnell, Deputy Director  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Material  
and Environmental Management Programs

Docket No: 40-9083

Enclosures:

1. Basis for Apparent Violation
2. NRC Information Notice 96-28
3. Issues to be Discussed at Predecisional Enforcement Conference

DISTRIBUTION: See next page

**ML110660245**

<b>OFC</b>	DWMEP	DWMEP	MSSA	MSSA	DWMEP	RIV	OE	OGC	DWMEP
<b>NAME</b>	NOrlando	PMichalak	MBurgess	JLuehman	KMcConnell	BSpitzburg	RSummers	CScott	KMcConnell
<b>DATE</b>	3/7/11	3/9/11	3/10/11	3/11/11	3/14 /11	3/16 /11	3/17/11	3/29/11	4/5/11

**OFFICIAL RECORD COPY**

**DISTRIBUTION:**

OEMail Resource;  
RidsSecyMailCenter Resource;  
RidsEdoMailCenter Resource;  
RidsFsmeOd Resource;  
RidsOpaMail Resource;  
RidsOigMailCenter Resource;  
RidsRgn1MailCenter Resource;

OEWEB Resource;  
RidsOcaMailCenter Resource;  
RidsOgcMailCenter Resource;  
RidsNmssOd Resource;  
RidsOiMailCenter Resource;  
RidsOcfoMailCenter Resource;  
RidsRgn3MailCenter Resource;

[Charles.Miller@nrc.gov](mailto:Charles.Miller@nrc.gov);

[Keith.McConnell@nrc.gov](mailto:Keith.McConnell@nrc.gov);

[Michele.Burgess@nrc.gov](mailto:Michele.Burgess@nrc.gov);

[Roy.Zimmerman@nrc.gov](mailto:Roy.Zimmerman@nrc.gov);

[Gregory.Bowman@nrc.gov](mailto:Gregory.Bowman@nrc.gov);

[Chuck.Casto@nrc.gov](mailto:Chuck.Casto@nrc.gov);

[William.Jones@nrc.gov](mailto:William.Jones@nrc.gov);

[Karla.Fuller@nrc.gov](mailto:Karla.Fuller@nrc.gov);

[Victor.Dricks@nrc.gov](mailto:Victor.Dricks@nrc.gov);

[Amy.Powell@nrc.gov](mailto:Amy.Powell@nrc.gov);

[John.Hayes@nrc.gov](mailto:John.Hayes@nrc.gov);

[Cynthia.Carpenter@nrc.gov](mailto:Cynthia.Carpenter@nrc.gov);

[Jack.Foster@nrc.gov](mailto:Jack.Foster@nrc.gov);

[Glenda.Villamar@nrc.gov](mailto:Glenda.Villamar@nrc.gov);

[Andy.Campbell@nrc.gov](mailto:Andy.Campbell@nrc.gov);

[Robert.Summers@nrc.gov](mailto:Robert.Summers@nrc.gov);

[Art.Howell@nrc.gov](mailto:Art.Howell@nrc.gov);

[Ray.Kellar@nrc.gov](mailto:Ray.Kellar@nrc.gov);

[Blair.Spitzberg@nrc.gov](mailto:Blair.Spitzberg@nrc.gov);

[Catherine.Scott@nrc.gov](mailto:Catherine.Scott@nrc.gov);

[Jenny.Weil@nrc.gov](mailto:Jenny.Weil@nrc.gov);

[Tracey.Stokes@nrc.gov](mailto:Tracey.Stokes@nrc.gov)

[James.Luehman@nrc.gov](mailto:James.Luehman@nrc.gov);

[Paul.Michalak@nrc.gov](mailto:Paul.Michalak@nrc.gov);

[Duane.White@nrc.gov](mailto:Duane.White@nrc.gov);

[Nick.Hilton@nrc.gov](mailto:Nick.Hilton@nrc.gov);

[Elmo.Collins@nrc.gov](mailto:Elmo.Collins@nrc.gov);

[Chuck.Cain@nrc.gov](mailto:Chuck.Cain@nrc.gov);

[Christi.Maier@nrc.gov](mailto:Christi.Maier@nrc.gov);

[Vivian.Campbell@nrc.gov](mailto:Vivian.Campbell@nrc.gov);

[Brett.Klukan@nrc.gov](mailto:Brett.Klukan@nrc.gov);

[David.McIntrye@nrc.gov](mailto:David.McIntrye@nrc.gov);

## **Basis for Apparent Violation**

### Summary

On March 4, 2010, a resident of Hawaii filed a request with the U.S. Nuclear Regulatory Commission (NRC) to take enforcement action against the Army if the NRC found that the Army had possessed or released depleted uranium (DU) to the environment without a license. The NRC reviewed this request pursuant to 10 CFR § 2.206, the process by which an individual may petition the NRC to take an enforcement action.

Based on the NRC's review of the information in its possession, it appears that the Army is in violation of 10 CFR § 40.3, "License Requirements," in that it appears that the Army is in possession of DU at multiple installations without proper NRC authorization in the form of a specific or general license issued by the NRC. It also appears that the Army performed decommissioning activities at the Schofield Barracks installation without NRC authorization.

Between 1962 and 1968, the Army apparently received and used DU (which the NRC licenses as source material) at test firing ranges located at two installations in Hawaii: Schofield Barracks and Pohakuloa Training Area. In addition, the Army suspects that it received and used DU at other installations across the United States, including Fort Benning, Georgia; Fort Campbell, Kentucky; Fort Carson, Colorado; Fort Hood, Texas; Fort Knox, Kentucky; Fort Lewis, Washington; and Fort Riley, Kansas. This DU was incorporated into the body of spotting rounds used in connection with the Davy Crockett weapons system. As a result of the testing of the Davy Crockett weapon system, DU was likely scattered throughout the firing ranges at the identified installations. The Army has indicated to the NRC staff that it believes that it discontinued testing of the Davy Crockett weapon system in Hawaii in 1968. The Army has not communicated to the NRC when it believes to have discontinued testing of the Davy Crockett weapon system at the other identified installations.

NRC license SUB-459 authorized the Army to manufacture the spotting rounds containing DU and to transfer those rounds for testing at other Army installations. At the request of the Army, SUB-459 was allowed by the NRC to expire in April 1978.

In November 2006, the Army notified the NRC of the discovery of DU at the Army's Schofield Barracks installation on the island of Oahu, Hawaii<sup>1</sup>. Specifically, an Army contractor visually discovered spotting round fragments while performing "range clearing" exercises for unexploded ordnance.

From November 2006 through February 2007, the NRC and Army staffs discussed the presence of the DU at Schofield Barracks. In February 2007, the Army sent a letter to the NRC outlining its investigation of the DU found at Schofield Barracks and indicated that it might need a license to possess the quantity of DU it believed to be present (ADAMS Accession No. ML070650679). The Army also suggested in the letter that, before submitting such a license application, it would determine the total number of installations that might contain DU from spent spotting rounds used in connection with the Davy Crockett weapons system. In March 2007,

---

<sup>1</sup> Memorandum from G.M. McCann to J. L. Cameron and D. B. Spitzberg, dated 3/5/2007 ML070650224

the NRC staff sent a letter to the Army stating that the approach suggested by the Army was reasonable (ML070710239). In August 2007, the U.S. Army notified the NRC that it had discovered DU contamination at the Pohakuloa Training Area installation.

On November 6, 2008, the U.S. Army Installation Management Command (IMCOM) submitted a license application to the NRC for a license to possess the quantities of DU believed by the Army to be present at various Army installations, including, in addition to the two Hawaiian installations, Forts Benning (Georgia), Campbell (Kentucky), Carson (Colorado), Hood (Texas), Knox (Kentucky) Lewis (Washington), and Riley (Kansas) (ML090070095). On November 16, 2010, NRC legal and technical staff held a license application meeting with Army legal counsel and technical staff at NRC headquarters.<sup>2</sup> At that meeting, the Army informed the NRC staff of the current status of its investigation of the extent of DU contamination at Army installations and indicated that DU contamination may be present at 17 installations. On November 30, 2010, the NRC staff issued a letter to IMCOM containing technical comments on the Army's license application submittals (consisting of a generic physical security plan and a generic environmental radiation monitoring plan (ERMP)) as well as on the site-specific EMRPs for the Schofield Barracks, Pohakuloa Training Area and Fort Benning installations (ML103160239).

In addition, on October 29, 2010, technical and project management staff from the U.S. Army Corps of Engineers (USACE) and IMCOM met with NRC staff at NRC headquarters to discuss planned construction activities in areas known to contain DU at the Schofield Barracks installation.<sup>3</sup> At the meeting, the Army reported that it had removed DU (utilizing the services of Cabrera Services, Inc., an NRC-licensed remediation contractor) from a portion of the Schofield Barracks installation as part of a project to construct a Battle Area Complex (BAX) at Schofield Barracks. On November 24, 2010, the NRC staff issued a letter to the Army outlining what decommissioning activities could and could not be undertaken by Cabrera Services in support of the Army's plan to construct a Battle Area Complex at the Schofield Barracks installation (ML103160174). In that letter, the NRC staff communicated to the Army that maintenance activities that would occur within areas believed to be contaminated with DU at the identified installations would need to be conducted in accordance with a radiation safety program approved by the NRC via a license. Accordingly, such maintenance activities would need to be suspended until a radiation safety program was approved via a license issued by the NRC.

It is the understanding of the NRC staff at this time that, although firing ranges located at the identified installations are controlled Army property and, as such, are not accessible to the general public, the Army continues to use those ranges for testing of various weapon systems. The NRC also understands that Army personnel may have in the past, as part of the performance of various tasks, including range maintenance activities, accessed areas where DU is believed to be located at the identified ranges. As a result, there is the potential that individuals and equipment (including vehicles), having entered the areas believed to contain DU, became contaminated with DU and, as such, inadvertently spread DU outside of the areas of original deposit, including offsite of the identified installations.

---

<sup>2</sup> A summary of the meeting as prepared by the NRC staff, along with a copy of the slides used at the meeting as well as the transcript for the meeting can be found at ML103360437.

<sup>3</sup> A summary of the meeting as prepared by the NRC staff can be found at ML103130409.

The details regarding the specific quantity of material issued to a given installation, previously recovered from ranges, or disposed of as radioactive waste is not currently known by the NRC staff. However, the NRC staff is aware that the Army estimates that the maximum cumulative amount of DU present at all of the identified installations is 8,000 kg (17,637 lbs). Table 1, below, summarizes the information provided by the Army to the NRC staff at the November 16, 2010 meeting. The Army has made commitments in its license application to perform scoping and characterization surveys to delineate the affected areas (subject to precautions required due to the presence of unexploded ordnance) and to determine the amount of DU at the various installations listed in Table 1, below.

<b>Table 1</b>	
<b>Location/Range</b>	<b>Estimated M101 spotting rounds</b>
Schofield Barracks and Pohakuloa Training Area, Hawaii	714
Fort Benning, Georgia	9,700
Fort Carson, Colorado	1,404
Fort Campbell, Kentucky	681
Fort Hood, Texas	4,038
Fort Lewis, Washington	1,756
Fort Knox, Kentucky	3,956
Fort Riley, Kansas	105
Fort Dix, New Jersey/Frankford Arsenal	Unknown <sup>a</sup>
Fort Gordan, Georgia	Unknown <sup>a</sup>
Fort Greeley, Alaska	Unknown <sup>a</sup>
Fort Hunter Liggett, California	Unknown <sup>a</sup>
Fort Jackson, South Carolina	Unknown <sup>a</sup>
Fort Polk, Louisiana	Unknown <sup>a</sup>
Fort Sill, Oklahoma	Unknown <sup>a</sup>
Yuma, Arizona/Nevada Security Site	50
Yakima Training Center, Washington	Unknown <sup>a</sup>
Aberdeen Proving Grounds, Maryland	200
60 installations on original list – narrowed down to current list based on Archive Search Reports (ASRs)	
ASRs = 29,207 total M101 rounds	
a – estimate to be provided at later date	

According to the terms of 10 CFR § 40.22, “Small Quantities of Source Material,” general licenses authorize the use and transfer of certain small quantities of source material. Based on the information provided by the Army in its license application, the NRC’s understanding is that the Army currently possesses DU in quantities that exceed the quantities authorized by 10 CFR § 40.22 at the installations identified in the table above.

### Apparent Violation

10 CFR § 40.3, "License Requirements," states, in part, that persons may not receive title to, own, receive, possess, use, transfer, or dispose source material unless authorized in a specific or general license issued by the NRC.

Based upon the above, it appears that the Army is in possession of DU, a source material, in quantities in excess of the exempt and general use limits, without authorization in a specific or general license issued by the NRC. From April 1978, when SUB-459 expired, to the present, the Army continued to possess DU in the form of spent fragments of spotting rounds (obtained from 1962 to 1968, and expended prior to 1968) at firing ranges located at the Army's two Hawaiian installations, Schofield Barracks and Pohakuloa Training Area, in apparent violation of 10 CFR § 40.3. In addition to the two installations in Hawaii, the Army has also identified the potential presence of DU contamination at other installations across the United States. The confirmed presence of DU at any of these installations will be treated as additional examples of this apparent violation of 10 CFR § 40.3.

It also appears that the Army may have performed certain decommissioning activities at the Schofield Barracks installation without necessary authorization from NRC. During the meeting with NRC staff on October 29, 2010, USACE staff informed the NRC that certain areas at the Schofield Barracks installation had been remediated and cleared for unrestricted use. Prior to that meeting with USACE staff, the NRC was not aware that the Army was pursuing such decommissioning activities and, as such, had not approved the release of any areas at Schofield Barracks known to be contaminated with DU for unrestricted use. Were the Army an NRC licensee with respect to the DU present at Schofield Barracks, the Army would have been required by 10 CFR § 40.42 to obtain NRC approval prior to releasing remediated range areas for unrestricted use at Schofield Barracks. As it is, the NRC may consider the Army's failure to obtain NRC approval prior to release of remediated range areas as a consequence of the Army's apparent violation of 10 CFR § 40.3 for possession of DU in licensable quantities in absence of a NRC license.



# NRC INFORMATION NOTICE 96-28

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, D.C. 20555

May 1, 1996

NRC INFORMATION NOTICE 96-28: SUGGESTED GUIDANCE RELATING TO  
DEVELOPMENT AND IMPLEMENTATION OF  
CORRECTIVE ACTION

## Addressees

All material and fuel cycle licensees.

## Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to provide addressees with guidance relating to development and implementation of corrective actions that should be considered after identification of violation(s) of NRC requirements. It is expected that recipients will review this information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not new NRC requirements; therefore, no specific action or written response is required.

## Background

On June 30, 1995, NRC revised its Enforcement Policy, to clarify the enforcement program's focus by, in part, emphasizing the importance of identifying problems before events occur, and of taking prompt, comprehensive corrective action when problems are identified. Consistent with the revised Enforcement Policy, NRC encourages and expects identification and prompt, comprehensive correction of violations.

In many cases, licensees who identify and promptly correct non-recurring Severity Level IV violations, without NRC involvement, will not be subject to formal enforcement action. Such violations will be characterized as "non-cited" violations as provided in Section VI.A of the Enforcement Policy. Minor violations are not subject to formal enforcement action. Nevertheless, the root cause(s) of minor violations must be identified and appropriate corrective action must be taken to prevent recurrence.

Enclosure 2

If violations of more than a minor concern are identified by the NRC during an inspection, licensees will be subject to a Notice of Violation and may need to provide a written response, as required by 10 CFR 2.201, addressing the causes of the violations and corrective actions taken to prevent recurrence.

In some cases, such violations are documented on Form 591 (for materials licensees) which constitutes a notice of violation that requires corrective action but does not require a written response. If a significant violation is involved, a predecisional enforcement conference may be held to discuss those actions.

The quality of a licensee's root cause analysis and plans for corrective actions may affect the NRC's decision regarding both the need to hold a predecisional enforcement conference with the licensee and the level of sanction proposed or imposed.

### Discussion

Comprehensive corrective action is required for all violations. In most cases, NRC does not propose imposition of a civil penalty where the licensee promptly identifies and comprehensively corrects violations. However, a Severity Level III violation will almost always result in a civil penalty if a licensee does not take prompt and comprehensive corrective actions to address the violation.

It is important for licensees, upon identification of a violation, to take the necessary corrective action to address the noncompliant condition and to prevent recurrence of the violation and the occurrence of similar violations. Prompt comprehensive action to improve safety is not only in the public interest, but is also in the interest of licensees and their employees. In addition, it will lessen the likelihood of receiving a civil penalty. Comprehensive corrective action cannot be developed without a full understanding of the root causes of the violation.

Therefore, to assist licensees, the NRC staff has prepared the following guidance, that may be used for developing and implementing corrective action. Corrective action should be appropriately comprehensive to not only prevent recurrence of the violation at issue, but also to prevent occurrence of similar violations. The guidance should help in focusing corrective actions broadly to the general area of concern rather than narrowly to the specific violations. The actions that need to be taken are dependent on the facts and circumstances of the particular case.

The corrective action process should involve the following three steps:

1. Conduct a complete and thorough review of the circumstances that led to the violation.  
Typically, such reviews include:

Interviews with individuals who are either directly or indirectly involved in the violation, including management personnel and those responsible for training or procedure development/guidance. Particular attention should be paid to lines of communication between supervisors and workers.

Tours and observations of the area where the violation occurred, particularly when those reviewing the incident do not have day-to-day contact with the operation under review. During the tour, individuals should look for items that may have contributed to the violation as well as those items that may result in future violations. Reenactments (without use of radiation sources, if they were involved in the original incident) may be warranted to better understand what actually occurred.

Review of programs, procedures, audits, and records that relate directly or indirectly to the violation. The program should be reviewed to ensure that its overall objectives and requirements are clearly stated and implemented. Procedures should be reviewed to determine whether they are complete, logical, understandable, and meet their objectives (i.e., they should ensure compliance with the current requirements). Records should be reviewed to determine whether there is sufficient documentation of necessary tasks to provide a record that can be audited and to determine whether similar violations have occurred previously. Particular attention should be paid to training and qualification records of individuals involved with the violation.

2. Identify the root cause of the violation.

Corrective action is not comprehensive unless it addresses the root cause(s) of the violation. It is essential, therefore, that the root cause(s) of a violation be identified so that appropriate action can be taken to prevent further noncompliance in this area, as well as other potentially affected areas. Violations typically have direct and indirect cause(s). As each cause is identified, ask what other factors could have contributed to the cause. When it is no longer possible to identify other contributing factors, the root causes probably have been identified. For example, the direct cause of a violation may be a failure to follow procedures; the indirect causes may be inadequate training, lack of attention to detail, and inadequate time to carry out an activity. These factors may have been caused by a lack of staff resources that, in turn, are indicative of lack of management support. Each of these factors must be addressed before corrective action is considered to be comprehensive.

3. Take prompt and comprehensive corrective action that will address the immediate concerns and prevent recurrence of the violation.

It is important to take immediate corrective action to address the specific findings of the violation. For example, if the violation was issued because radioactive material was found in an unrestricted area, immediate corrective action must be taken to place the material under licensee control in authorized locations. After the immediate safety concerns have been addressed, timely action must be taken to prevent future recurrence of the violation. Corrective action is sufficiently comprehensive when corrective action is broad enough to reasonably prevent recurrence of the specific violation as well as prevent similar violations.

In evaluating the root causes of a violation and developing effective corrective action, consider the following:

1. Has management been informed of the violation(s)?
2. Have the programmatic implications of the cited violation(s) and the potential presence of similar weaknesses in other program areas been considered in formulating corrective actions so that both areas are adequately addressed?
3. Have precursor events been considered and factored into the corrective actions?
4. In the event of loss of radioactive material, should security of radioactive material be enhanced?
5. Has your staff been adequately trained on the applicable requirements?
6. Should personnel be re-tested to determine whether re-training should be emphasized for a given area? Is testing adequate to ensure understanding of requirements and procedures?
7. Has your staff been notified of the violation and of the applicable corrective action?
8. Are audits sufficiently detailed and frequently performed? Should the frequency of periodic audits be increased?
9. Is there a need for retaining an independent technical consultant to audit the area of concern or revise your procedures?
10. Are the procedures consistent with current NRC requirements, should they be clarified, or should new procedures be developed?
11. Is a system in place for keeping abreast of new or modified NRC requirements?
12. Does your staff appreciate the need to consider safety in approaching daily assignments?
13. Are resources adequate to perform, and maintain control over, the licensed activities? Has the radiation safety officer been provided sufficient time and resources to perform his or her oversight duties?
14. Have work hours affected the employees' ability to safely perform the job?
15. Should organizational changes be made (e.g., changing the reporting relationship of the radiation safety officer to provide increased independence)?
16. Are management and the radiation safety officer adequately involved in oversight and implementation of the licensed activities? Do supervisors adequately observe new employees and difficult, unique, or new operations? Has management established a

work environment that encourages employees to raise safety and compliance concerns?

17. Has management placed a premium on production over compliance and safety? Does management demonstrate a commitment to compliance and safety?
18. Has management communicated its expectations for safety and compliance?
19. Is there a published discipline policy for safety violations, and are employees aware of it? Is it being followed?

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 listed below.

Robert C. Pierson, Director  
Division of Fuel Cycle Safety and  
Safeguards  
Office of Nuclear Material Safety and  
Safeguards

Donald A. Cool, Director  
Division of Industrial and Medical  
Nuclear  
Office of Nuclear Material Safety and  
Safeguards

Technical contacts: (Updated as of November 22, 2005)

Maria E. Schwartz, Office of Enforcement  
(301) 415-1888  
[Internet:mes@nrc.gov](mailto:Internet:mes@nrc.gov)

Daniel J. Holody, RI  
(610) 337-5312  
[Internet:djh@nrc.gov](mailto:Internet:djh@nrc.gov)

Carolyn Evans, RII  
(404) 562-4414  
[Internet:cfe@nrc.gov](mailto:Internet:cfe@nrc.gov)

Steve Orth, RIII  
(630) 810-4373  
[Internet:sko@nrc.gov](mailto:Internet:sko@nrc.gov)

William Jones, RIV  
(817) 860-8182  
[Internet:wbj@nrc.gov](mailto:Internet:wbj@nrc.gov)

## Issues to be Discussed at the Predecisional Enforcement Conference

At the predecisional enforcement conference, the Army should be prepared to provide the following information:

1. The Army's assessment of the root and contributing causes of the apparent violations.
2. If additional installations have been identified since the November 16, 2010, meeting.
3. For each installation identified at the November 16, 2010, meeting:
  - a. Whether the Army has confirmed the amount of depleted uranium (DU) present;
  - b. The timeframe for completing the evaluations to determine the amount of DU present if the amount is not yet known; and
  - c. For each installation with DU confirmed to be present, the date the Army made the determination that DU was present as well as the date the Army believes it came into possession of DU at the installation.
4. Whether the Army has completed an evaluation to determine if DU is present at installations other than those identified in the November 16, 2010, meeting. If no such evaluation has been completed or planned, the Army should be prepared to discuss its basis for concluding that DU is not potentially present at other installations.
5. A description, including dates, of all actions taken or planned by the Army since the initial discovery of DU, specifically addressing:
  - a. Restoring compliance with NRC requirements to maintain a license to possess DU;
  - b. Access control to areas containing or potentially containing DU;
  - c. Prevention of the spread of DU contamination;
  - d. Utilization of the firing range containing DU contamination;
  - e. Assuring that NRC regulatory limits on exposure to members of the public and to workers will be met;
  - f. Assuring that NRC regulatory limits on release of material will be met;
  - g. Any restrictions for use of the firing ranges; and
  - h. Evaluations to determine if DU contamination has been transported off the ranges.

6. A description of all actions performed at the Schofield Barracks installation in support of the construction of the BAX, specifically addressing when these actions were performed and who performed them.
7. A description of the areas at Schofield Barracks that the Army determined, as part of the BAX construction project, that were suitable for unrestricted use. This description should include when such determinations were made and who specifically made them.
8. A description, including dates, of the manner in which the Army has suspended personnel entry into areas at the identified ranges known or believed to be contaminated with DU. If the Army has not suspended entry into areas known or believed to be contaminated with DU, the Army should be prepared to discuss its reasons for not doing so.